

BERNINA

Model 740, BERNINA-Favorite
Zigzag Sewing Machine with
automatic ornamental stitch device

Model 741
Zigzag Sewing Machine with
automatic ornamental stitch device

Model 742
Zigzag Sewing Machine without
automatic ornamental stitch device

FR. GEGAUF LTD. BERNINA SEWING MACHINE FACTORY
STECKBORN / Switzerland

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The Warranty Certificate is sent to the Buyer direct by the Importers. Please complete and mail to them the card supplied with the machine, and they shall send you the Warranty Certificate.

Terms of Guarantee

We engage ourselves to repair free of charge any defects due to faulty material and/or workmanship arising during five (5) years in the machine, and during two (2) years in the motor of the Bernina Model 740, 741, or 742 sewing machine supplied by us. All other claims are excluded from this guarantee, which is valid only towards the first buyer of the machine.

This guarantee becomes valid on the day of the delivery of the machine. A buyer wishing to claim under the guarantee should return the machine to the Bernina representative next to his domicile. Transport charges as well as any damage caused by faulty packing are at buyer's expense.

The guarantee does not cover normal wear and tear, nor any damage resulting therefrom; such as cable breaking, burning out of electric bulb, a. s. o.

This guarantee does not apply if the buyer does not treat the machine in the right way, as indicated in the instructions for use, if the machine is not properly cleaned and lubricated, nor in the right way; if third persons not appointed by us are allowed to effect alterations and/or repairs.

Damages due to faulty manipulations are not covered by this guarantee.

The guarantee is only valid if high-grade sewing machine oil and needles of the system no. 130 are used.

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Fig. 1 hereunder shows a Bernina Favorite sewing machine model 740 with horizontal motor. It is a zigzag sewing machine with ornamental stitch and buttonhole device. The controls referred to in the operating instructions are marked thereon and identified as well.



Fig. 1

- | | |
|---|--|
| 1 Back plate | 14 Flap plate covering spooling device |
| 2 Needle plate | 15 Handwheel |
| 3 Needle holder | 16 Handwheel release |
| 4 Thread regulator | 17 Needle displacement lever on left, medium, or right position |
| 5 Face cover | 18 Plain stitch, zigzag, and buttonhole sewing control knob |
| 6 Light switch | 19 Switch button for buttonhole device |
| 7 Thread lever | 20 Switch button for satin stitch stop |
| 8 Thread tension and thread guide | 21 Plug-socket for light |
| 9 Thread tension control plate | 22 Extension plate |
| 10 Sight hole for tension control | 23 Regulation knob for adjusting closeness of stitches with buttonholes and satin stitch seams |
| 11 Sight hole for ornamental stitch indicator control | 24 Stitch length regulating lever |
| 12 Switch lever for ornamental stitch selection | 25 Feed retracting knob |
| 13 Change lever for zigzag or ornamental stitch | |

The figure no. 2 hereunder shows a Germina model 741 sewing machine. The controls referred to in the operating instructions are marked thereon and identified as well.

Fig. 2





Fig. 2

In the opposite fig. no. 3 you will see a Bernina sewing machine of model 742, whereon the controls referred to in the operating instructions are marked thereon and identified as well.

- | | | |
|-----------------------------------|---|--|
| 1 Base plate | 10 Slight hole for tension control | 19 Switch button for buttonhole device |
| 2 Needle plate | 14 Flap-plate covering spooling device | 20 Switch button for satin stitch stop |
| 3 Needle holder | 15 Handwheel | 22 Extension plate |
| 4 Thread regulator | 16 Handwheel release | 23 Regulation knob for adjusting closeness of stitches with buttonholes and satin stitch seams |
| 5 Face cover | 17 Needle displacement lever on left, medium, or right position | 24 Stitch length regulating lever |
| 6 Light switch | 18 Plain stitch, zigzag, and buttonhole sewing control knob | 25 Feed retracting knob |
| 7 Thread lever | | |
| 8 Thread tension and thread guide | | |
| 9 Thread tension control plate | | |

Motor

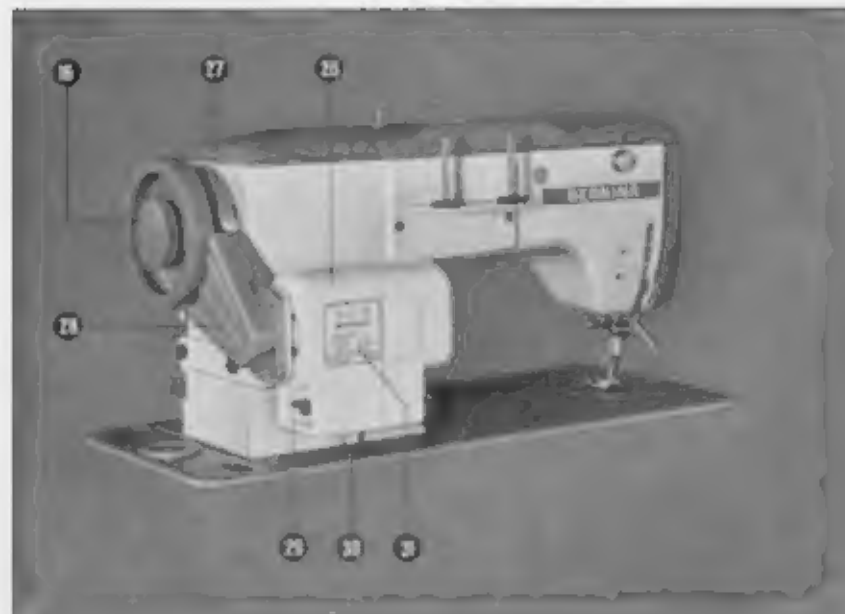


Fig. 4

16 Handwheel release screw

26 Motor

27 V-belt

28 Belt protecting plate

29 3-pole coupling plug,
combined for cable to
supply circuit and for
footstarter

30 Supply circuit plug

31 Date plate

The Bernina-Favorite sewing machines, models 740 and 741, as well as 742, are driven by a horizontal motor fixed at the back of the machine on the balance-wheel side. Drive is effected by means of a V-belt acting directly onto the groove of the balance-wheel. The coupling plug 29 is of the 3-pole type. The cable for the footstarter, as well as the cable with plug for junction to the electric supply circuit are both connected therewith.

A so-called data or rating plate 31, giving particulars of the voltage and power of the motor, is fixed on the casing. Prior to connecting the flex to the mains, make definitely sure that the voltage indicated on the rating plate (i.e. the number of volts) corresponds to the mains voltage.

Said mains voltage is indicated on the current meter of your home.

Do not rely on the number of volts indicated on plugs and sockets!

Care of the motor

a) Lubrication

The motor has friction bearings, by means of which a nearly silent running can be obtained. The bearings are automatically lubricated, so that they need no service at all.

b) Carbon brushes

From time to time the length of the carbon brushes should be seriously controlled. In order to accomplish this task, the upper and lower brush support plates, situated at the front side of the motor, must be unscrewed and the carbon brushes removed. If these carbon brushes are not removed in due time, with a minimum length of $\frac{1}{8}$ ", they will damage the collector and soon the motor can no more be used.

When re-inserting the carbon brushes please take care that the ground rounding which must match with the rounding of the collector is not introduced the wrong way!

The sewing light

The lamp is mounted in the swivelling head cover to enable an even distribution of light over the entire sewing area, completely free from any glare.

It is switched on and off by pressing the light button 6. The bulb can be changed as is usual currently with all lamps. Turn it to the left to remove, and to the right to insert.

A more perfect stitch is obtained if the under thread is chosen somewhat finer than the one used for upper thread. The reel from which the winding has to be performed is placed on one of the 230 reel pins 15.

In order to prevent the sewing machine from running needlessly when winding turn with your right hand the handwheel release screw 16 as far as possible toward is you, and at the same time holding the hand wheel 14 firmly with your left hand.

Place the bobbin 11 on the bobbin shaft 10 protruding from the hinged cover. Now the winding takes place as follows: First lead the thread from the reel round the winder pretension device 17, so that the thread is crossing, and from there over the thread guide bolt 22 to the bobbin 11. Here too the thread should wind in a clockwise direction on the bobbin. Now push lever 18 against the bobbin until it gets engaged.

Then the motor can be started by a slight pressure on the knee lever, respectively on the pedal starter, the mechanism being still at rest. Operate the machine until the bobbin is filled, whereupon the winder will stop automatically. After the filled bobbin has been taken off lever 18 with winder pretension device should be turned on again and the foot cover 14 can be returned to its starting position. Re-lighten hand wheel release screw 16 once more.

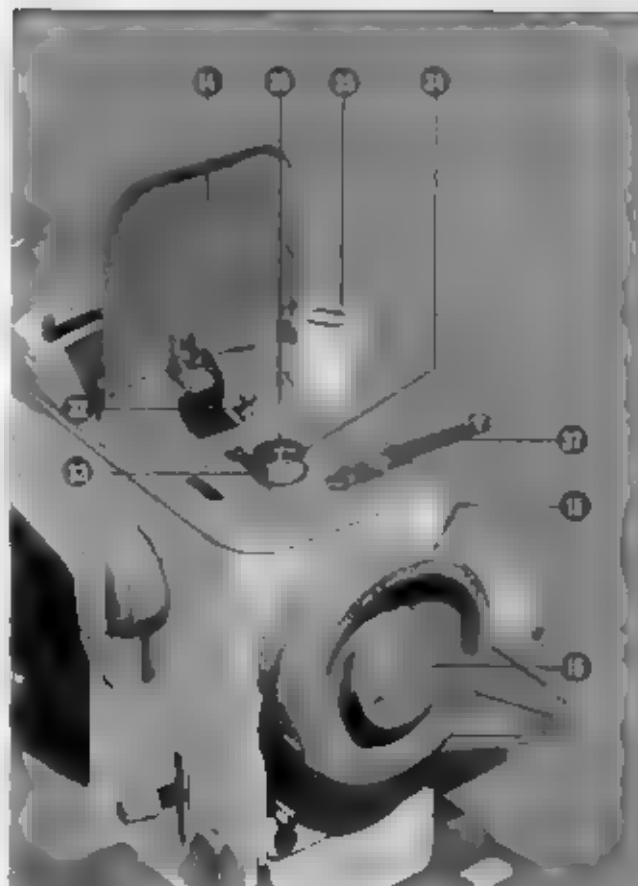
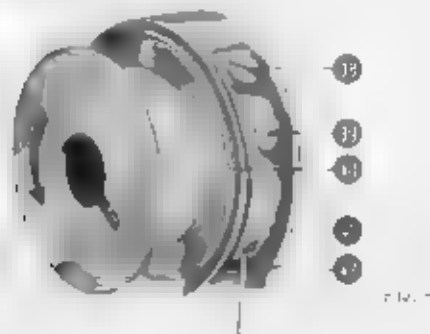


Fig. 7

Inserting the bobbin into the bobbin case and threading the under thread

When replacing bobbin into bobbin case, make sure that bobbin turns in direction of arrow when thread is pulled. After having inserted the bobbin into bobbin case, pass thread through slot 40 below tension spring and allow it to come out at the end of tension spring 42. The screw 38 fixes the thread tension spring, whereas screw 39 regulates said tension (see fig. 8).



Replacing bobbin case with bobbin into shuttle

Insertion of bobbin case is possible only when the thread level is approximately in its uppermost position.

The bobbin case is held by the opened latch, same as when removing it (see fig. 5). Thumb and forefinger

of the left hand hold the open hinged latch A in such a way that the opening of the bobbin case points upward and can enter the recess in the shuttle race cover. Then place the bobbin case on the pin of the bobbin case finger until it strikes the bottom of the shuttle. Now release latch and make sure that the bobbin case is properly closed so that it cannot fall out any more.



Setting the needle

Use only system 130 needles. Needles with blunt points or bent needles should never be employed. Turn handwheel 15 towards you, until the needle bar is at its highest.

Hold needle between thumb and forefinger of the left hand so that the long groove faces you. The flattened end of the needle shank must therefore be at the rear. Now loosen the needle holder screw by turning it to the left and insert the needle until it strikes above.

Then retighten needle holder screw by turning it to the right. It is important that the needle should be pushed right up to the needle stop and be firmly clamped by the needle holder screw.

Correct needle and thread selection

System 130 needles should be used exclusively on the Bernina-Favorite, model 740 and model 741, as also on model 742. In order to obtain good results, use only first class needles, as also high-grade thread.

First select the thread suitable for the intended work and then the needle to accommodate the thread, consulting in this intent the table hereafter.

Needle and Thread

The relation between needle and thread is correct if the thread when pushed in the hole needle groove, fills this latter well and can be freely moved to and fro.

For sewing the usual needle sizes are 60, 80, 90 and 100, whereas for darning the needles of the sizes 60, 70 and 80.

Needle and thread table

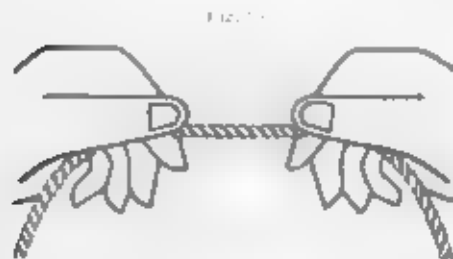
Needle size	Thread weight	Thread count	Thread
No. 60	15-20	15-20	50-100
70	20-30	20-30	50-80
80	30-40	30-40	30-40
90	40-50	40-50	
100	50-60	50-60	

Thread suitable for sewing and darning

For plain-stitch sewing:	No. 10-20, three and six-ply, unglazed
For darning:	No. 50-80, two-ply
For zigzag sewing:	No. 50-90, three-ply only
For overcasting stitches:	No. 30 and 40, two-ply

Left- and right-hand twisted thread

For darning left-hand twisted thread should only be used as upper thread. The under thread may be right- or left-hand twisted. The twist of the thread can be determined as shown in fig. 12. With both



hands take hold of a thread end and with the thumb turn thread towards you. Left-hand twisted thread will tighten still more, whereas right-hand twisted thread will loosen.

It will be the best way to buy sewing and darning thread at the Bernina dealer's shop. There you will be able to get all the products suitable for your Bernina sewing machine.

Threading the upper thread (fig. 11 and 12)

Place a reel of thread on one of the two spool-pins 35 situated at the back of the top arm. From there lead thread through the pretension 40 equally placed at the back of arm, then into slot running across top

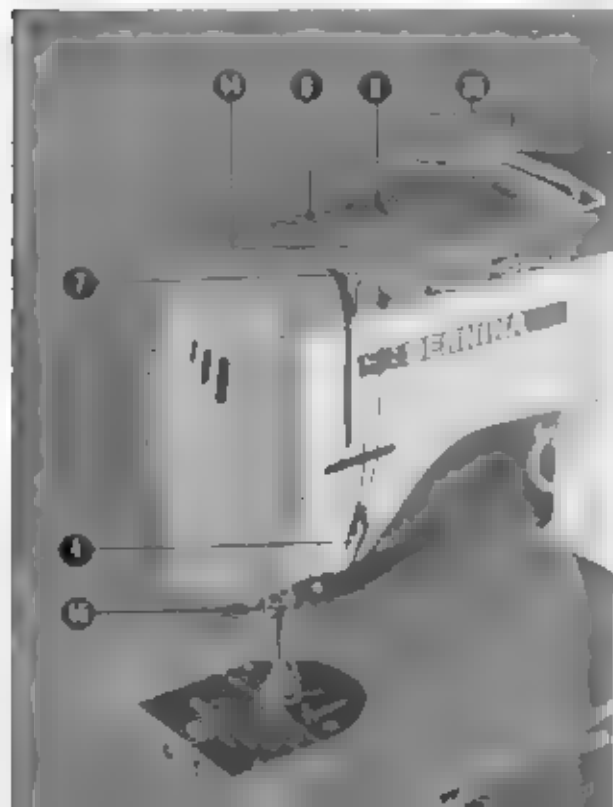


Fig. 11.

arm. In its centre the double thread tension is arranged. The central tension disk is protruding a little bit from slot 44. When sewing with one thread only, it does not matter whether the thread is drawn at the left or at the right of the central tension disk into the tension properly speaking. At the front pass the thread down to thread regulator 1. Then up again through front bore of thread lever 7, down once more through needle holder eyelet 45, and

finally through eye of the needle itself, from front to rear. When threading, make sure that thread lever 7 and needle are in their upmost position.

Fig. 12

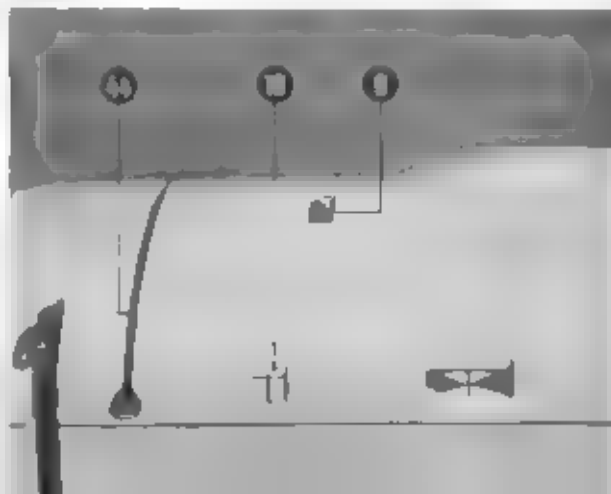


Thread tension fig. 13

The Bernina sewing machines offer the unique advantage that the thread tension must never be changed. Only two marked lines are provided for control. When the fixed marked line on top arm and the other or mobile part of thread tension device are set and move the other, the perfect thread tension is attained. With Bernina sewing machines, a graduated scale is not necessary.

By means of the adjusting disk on the thread tension can be changed for special purposes, if any. If the marked line is moving behind sight hole 10 to the right, the thread tension will be reinforced, whereas, if said marked line moves to the left, the tension will be weaker.

Fig. 13

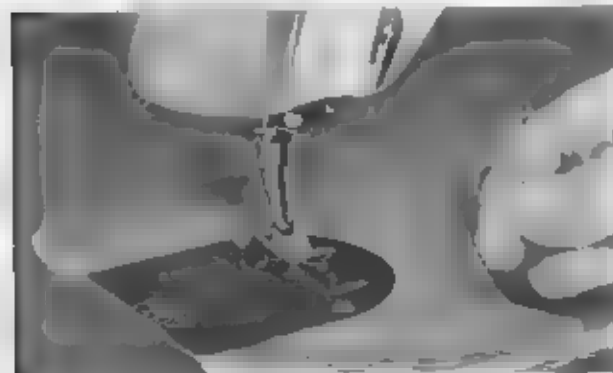


Correct normal tension is set when the marked line is tight along the fixed marked line on right side.

Drawing up the under thread

Before sewing can be started, the under thread should be drawn up. With thumb and forefinger of the left hand hold the end of the needle thread, leaving it slack from hand to needle. Now turn hand-wheel with one single revolution towards you, until protruding it in the eye of the needle the thread causes the thread to rise about approximately 1/2 in. highest position. Presently draw a little on the end of the needle thread, whereby the under thread will come through the stitch hole towards above. Tighten upper and under thread slightly, and pass them back and under the pressure foot.

Fig. 15



To lower the feed dog (Fig. 16)

For certain sewing purposes, and mainly for darning, the feed dog should always be lowered. Below on the right side of the sewing machine a control knob 25 is provided, by means of which the feed dog can be taken out of action or set ready for sewing. Marked signs on the right of said knob 25 are illustrating the actual location, i.e. to the right for sewing and to the left for darning.

Fig. 16



25

Thread cutter

The pressure foot holding device on the Bernina sewing machines is designed in such a way that it also serves as thread cutter.

This small gadget helps to save time, especially when the scissors are not immediately at hand.

Fig. 17



To clean the machine

Fluff is removed during sewing, particularly around the fluff rollers, **1**, between stitch plate and feed dog, **2**, that all may detrimentally affect the proper function of the sewing machine and it is recommended that it be removed at frequent intervals. From time to time unscrew stitch plate **2** (see fig. 1 to 6), so that the fluff which has accumulated under the stitch plate can be adequately removed.



Fig. 10

Cleaning and Oiling

To insert the cover plate, move it upwards in direction of the arrow and introduce the bottom of the cover plate into the guiding provided in the stand. Then depress the cover plate to its lower position, where the stitch plate is, and the latter will engage automatically (see fig. 10).

Fig. 11

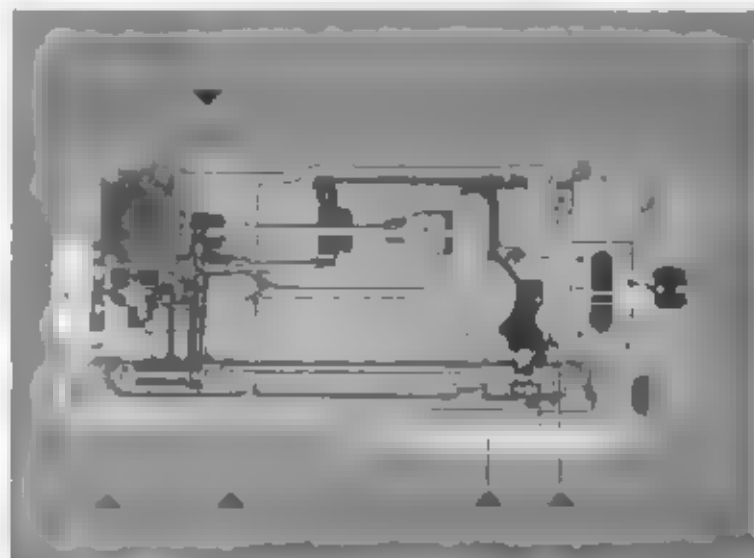
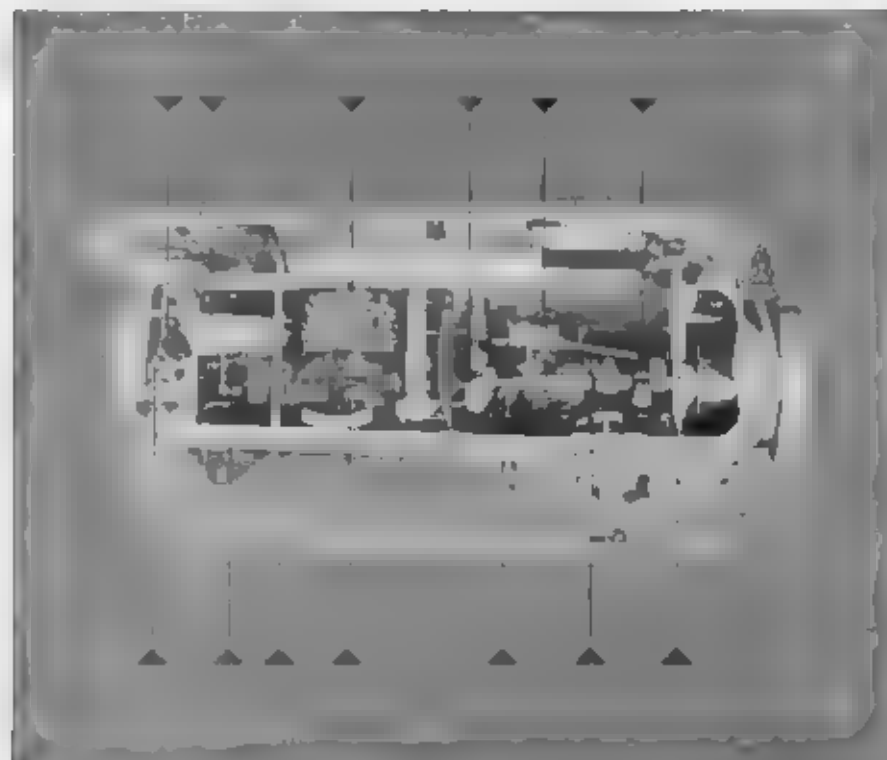


Fig. 20



The sewing machine should be oiled frequently, but never too liberally. A few drops of oil will be sufficient to keep the machine running freely. Oil in excess will drain off unused and may only soil the fabric.

Always oil your machine before sewing and not afterwards. Use clear oil, which is free from resin and acid, such as is supplied by all the Bertrams representatives. The use of inferior oils may cause your sewing machine to jam when the oil dries up and becomes tacky. The figures 18, 19 and 20 show the oiling points indicated by a series of black lines. By means of opening the slide on the base plate you will have access to the shuttle of which the race should be oiled frequently, but only lightly, at the point indicated by an arrow (see fig 18).

Expert, they guarantee the silent running of the sewing machine and preserves its durability. The oiling points are visually depicted in figures 18, 19, and 20 and marked with red colour on the machine itself.

When the sewing machine has been kept in a cold room, it should be opened and placed in a warmer room about an hour before use, so that it can assume room temperature and allow the oil in the bearings to become liquid again.

Fig. 20



The shuttle

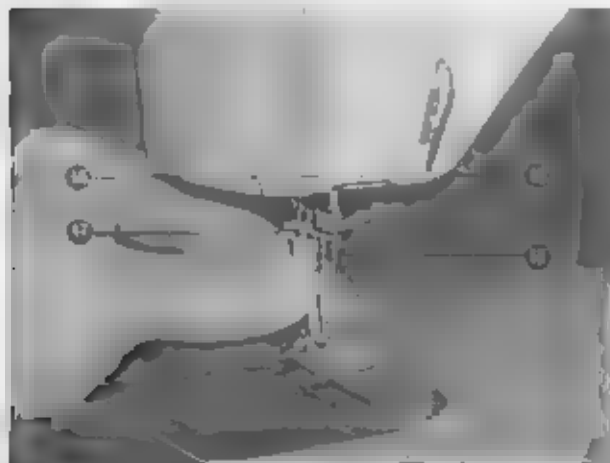
The Bernina sewing machines model 710, 711, and 712 are all furnished with a patented shuttle. This shuttle ~~has been patented in many countries~~ is known throughout the world. Its distinctive feature is to make the machine practically impossible to use, ~~mistake~~ resulting from wrong manipulation. See fig. 21.

Plain Satchel

Plain stitching with standard and special presser foot

Exchanging the presser foot

The different tasks of sewing require a variety of foot. Frequent changes of the foot is a serious defect. For this reason the Bernina sewing machines models 740, 741 and 742 have been equipped with the patented "Pig-Foot" which can be converted as



4. L. . .

easily as an electric plug, no screwdriver being needed and a lifetime stability guaranteed.

1. How to repair the process in use: fig. 22

The presser bar with presser foot attached is raised by means of the lifting lever located at the back of the motor control. Now raise the clamping lever 15 which is located under the magazine and is of presser foot 16 far enough so the back 17 of said clamping lever 15 releases the clamping can 18 entirely. Now the presser foot will drop automatically or with very little assistance from the presser bar 19, so that it can easily be removed.

1. When replacing the pressure foot push presser #1 firmly into the presser bar channel and fix it with the end of the channel (see fig. 16).

The plain stitch

F - plain stitchline adjust the sewing machine as follows:

1. Raise thread lever to its uppermost position
2. Insert zigzag foot, but *do not* attempt to sew. Take a lot of fabric with plain stitching. It will be advisable to use the normal presser foot for plain stitching.
3. Thread the upper thread from front to back through the eye of the needle. Then draw up the lower thread and lay both threads under and to the back of the presser foot.
4. Turn the foot to the right. Symbols to be put in "Stitching".

5. Unscrew stitch regulating device 21, the stitch regulating device being fitted just as a turnable wheel is mounted with the stitch length can be adjusted by turning same in or out, and regulate the stitch length device on the wished for number. Normally this will be 15.

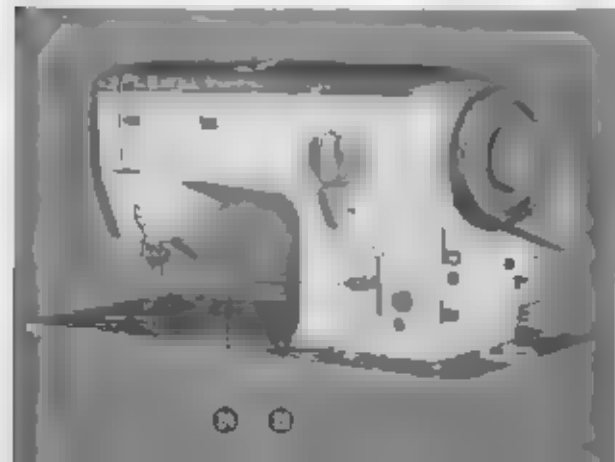
6. Set zigzag knee 18 in such a way that the zero mark be once visible on the graduated stitch width scale above sewing guide.


Make sure that the hand wheel is always directed towards the operator when turning the sewing machine.

Forward and backward sewing, and adjustment of different stitch lengths


According to the position of the stitch regulating lever 21, the machine will sew forward or backward.

Fig. 1




ward forming  for way long or short stitches. If the stitch regulating lever 21 is pushed down until the marked line is on label number zero at the left side of scale the machine will sew forward. If to the contrary the stitch regulating lever 21 is pushed upwards to just above number zero, the machine will sew backward.

Forward and backward sewing serves to strengthen certain sewing areas and to secure the ends of the thread.

The more the stitch regulating lever screw 21 is displaced either upward or downward the longer the forward or backward stitch will be. In order to ensure that both forward and backward stitches will be of the same length, the lock screw of the stitch regulating lever 21 should  turned, respectively tightened or loosened. In this manner the upward and downward movement of the stitch regulating lever 21 can be limited. When loosening said lock screw the displacement of the lever will be increased whereas by tightening same it will be reduced adequately.

To remove the work from the machine

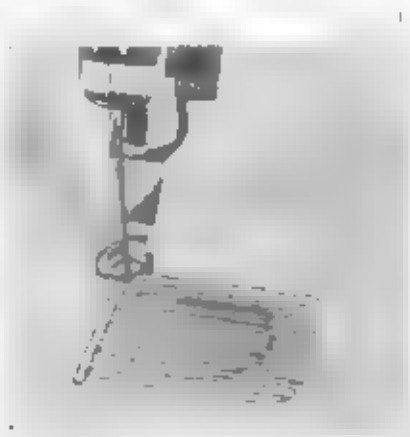
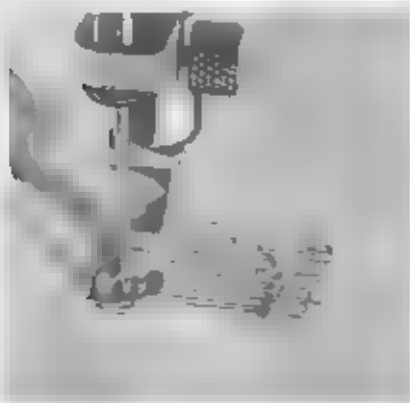
Raise the thread lever to its uppermost position. Then raise also the presser foot by means of the lifting lever. This will release the upper thread tension and the working piece can now easily  be removed without having to draw or the thread previously.

Darning

When the machine stands be set for darning and sewing is performed as follows:

1. Lower foot bar by turning knob 25 to the left (see "Darning" symbol—see page 16).
2. Adjust upper knob 18 from 0 to 1 position.
3. Set stitch regulating lever 24 upon zero point to prevent the foot bar from being operated without sewing.
4. Raise thread lever to its uppermost position.

Fig. 24



5. Remove pressed foot and insert darning or bopper foot.
6. Insert darning plate.
7. The taking of hold is as for buttonholing (see Fig. 20, page 15).

Darning table linen, towels, etc.

Cut out the whole damaged spot, so that only good material remains. Start as shown in Fig. 24a, in directing the work by hand so that one thread comes to lie directly along the other. It will be useful to guide the threads about 1/4" beyond the edge of the hole, but in somewhat different lengths altogether. This will add to strengthen the material and the hole.

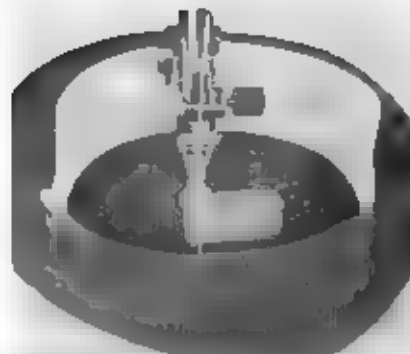
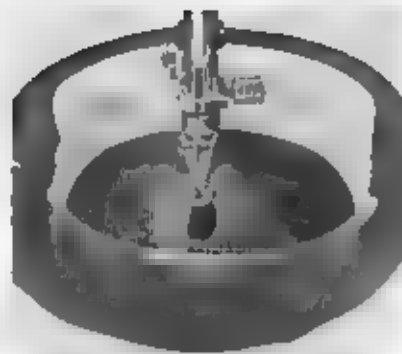
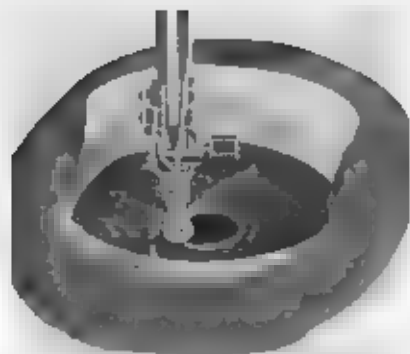


Fig. 21a b c

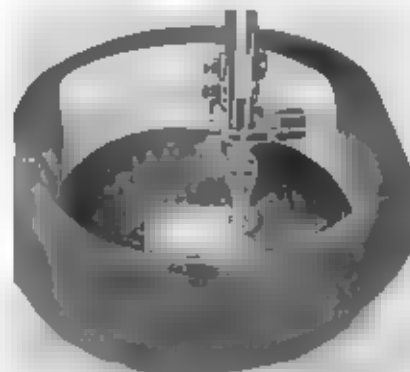
After the stitching has thus been performed, continue, as shown in Fig. 21b, to sew a second layer of threads over the first line of stitches, thereby now going a bit outwards of the drum, stitched threads. This second layer should be a bit more covering.

Finally stitch a few more rows at equal distance apart, in order to fill eventual gaps. This should be done in a very regular manner (see Fig. 21c).

Darning stockings

• The darning apparatus is available only against extra charge.

For darning stockings the darning apparatus is used, on which the stocking is pulled in such a way



d

that the damaged area comes to lie in the middle of the apparatus.

Now place the stretched stocking under the presser foot for darning and work a simple plain stitch over around the damaged area. This stitching will prevent laddering (see fig. 25a). Continue by stitching from front to back across the direction of the loops, one row along the other (see fig. 25b). The darning rows should be laid about $\frac{1}{2}$ to $\frac{3}{4}$ " beyond the edge of the damaged area. This should be done with lines of unequal lengths.

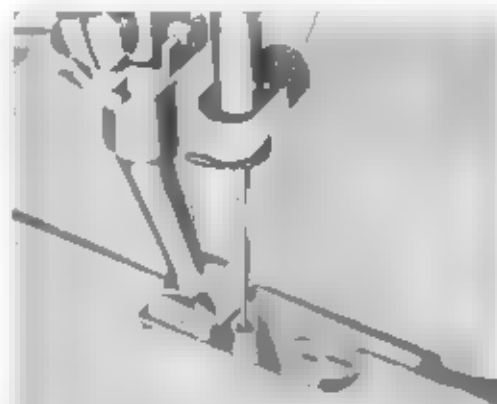
After the stitching has been completed turn the darning apparatus round about a one-quarter turn and begin with the covering of the first lines of stitches. In order to make these covering lines less visible, work them in the direction of the loops, beginning outside of the farthest first line (see fig. 25c). These covering lines of different lengths should run parallel with the loops. Slightly fill in the small spaces remaining in the darning area properly speaking working lines of stitches in the same direction as before, but these lines should not reach beyond the edge of the former hole (see fig. 25d).

THE FELLERFOOT

In order to connect two pieces of material (trousers, shirts, etc.) by means of a firm seam the fellerfoot is used, whereby the felled seam is obtained in two different operations.

1st operation (see fig. 26)

Arrange the fabric sections to be joined together on top of each other, in such a manner that the bottom section slightly projects from the top one, and pass



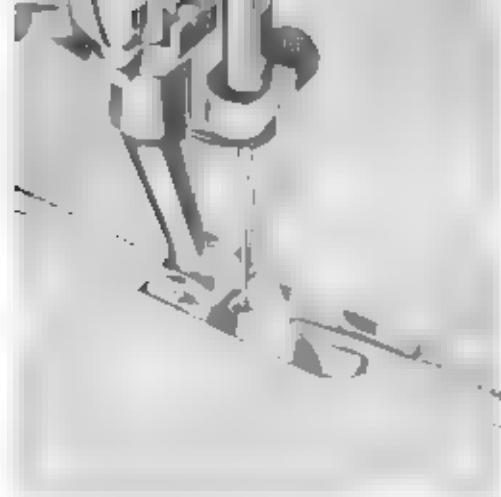


Fig. 24

both six times under the fellfoot as when hemming, so that they fold over. Make sure that the same width of material enters the fellfoot.

End operation (see Fig. 25).

The two fabric sections are now refolded and laid flat, so that the seam which has been formed stands up like a point. This point is again passed into the fellfoot (the same foot is used and the same for foot size), so that it is folded over and can now be sewn down.

Hemmer

Hem width: a width of approximately 1 cm.

Attach the hemmer in place of the ordinary presser foot, raising the presser foot to the purpose.

Fold the edge of the material over to the desired hem width and guide the unprepared fabric into the spiral-type guide (type of the raised hemmer) just under the needle of the hemmer. When sewing, the lip of the guide leads the fabric edge (see Fig. 26). If too much fabric enters the hemmer, the seam will appear bulky and, after unsewing it, the fabric will not be folded in sufficiently and does not lie in the seam in the way which is correct and nice to look at.

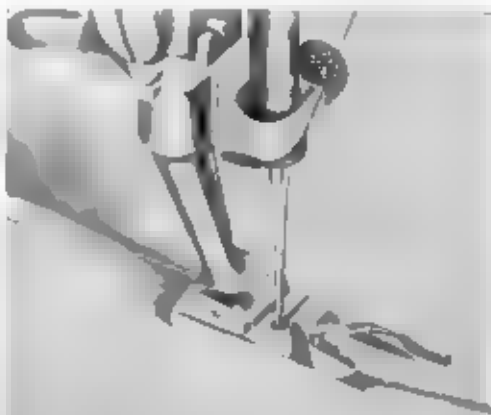
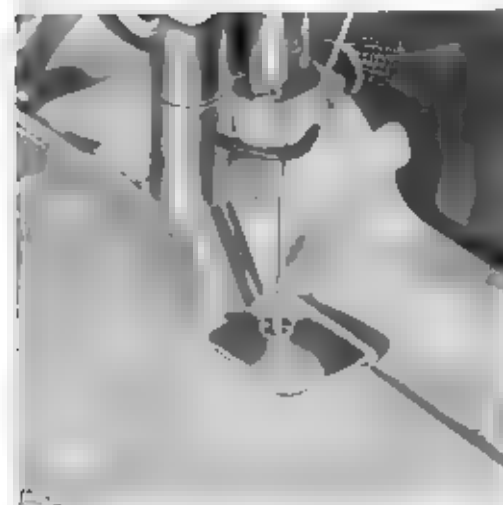


Fig. 25

Gathering foot

(To be supplied only against extra charges)

Fig. 1



Introduce gathering foot and adjust sewing machine open plain stitch sewing.

Put the material to be gathered under the gathering foot, introduced into the transverse slot. Lower the gathering foot by means of the presser foot lever and introduce the piece of material to be gathered, which must remain quite flat for the moment going into the foot as far out of the gathering foot as far as it will go. To increase the amount of gathering on the bottom material, hold the top material back. The more it is retained, the greater the fullness of the gathering will be, and vice versa.

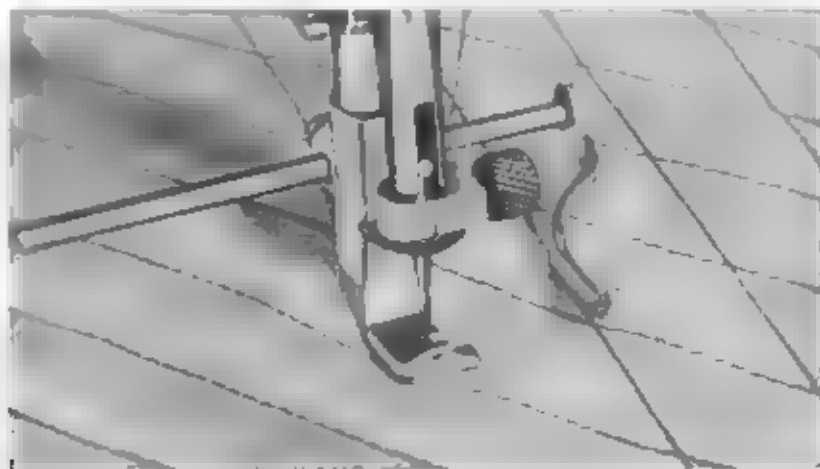
If only one layer of fabric has to be gathered, place this material beneath the gathering foot into the feeding, where the adjusted stitch length will regulate the fullness of the gathering. A somewhat longer stitch will increase said fullness, whereas a shorter one will decrease it.

Edger

Adjust the sewing machine upon plain stitch sewing and introduce the edger instead of the standard presser foot.

The edger with its stitch hole farthest to the right of foot is specially suited for edge stitching. For this purpose the edge stitcher is employed *without* the quilting guide.

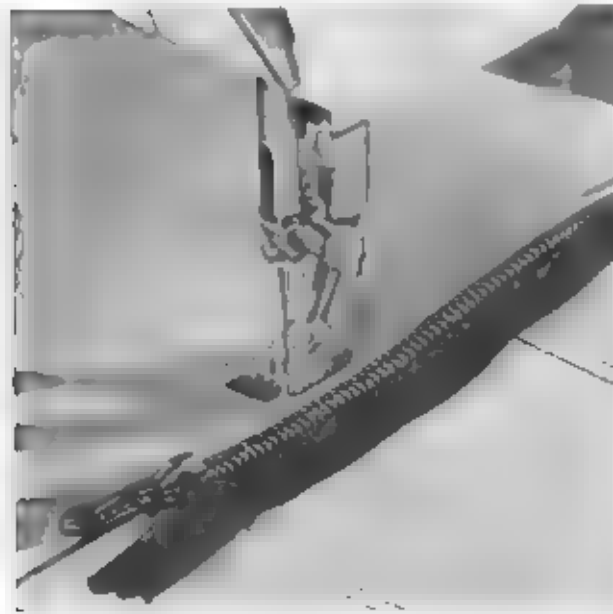
The edger with quilting guide is mostly used for quilting works (see fig. 31), when the distance of the guide from the needle determines the width between the rows of stitches. Adjust correspondingly and when sewing guide the fabric in such a way that the quilting guide runs always with the precedent seam. In such a way all the seams – the cross seams included – are quite parallel one with respect to the others.



THE ZIPPER FOOT

(Available only against extra charge)

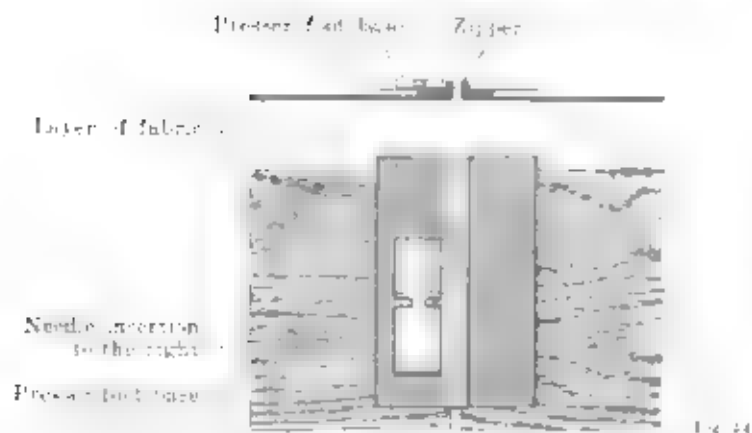
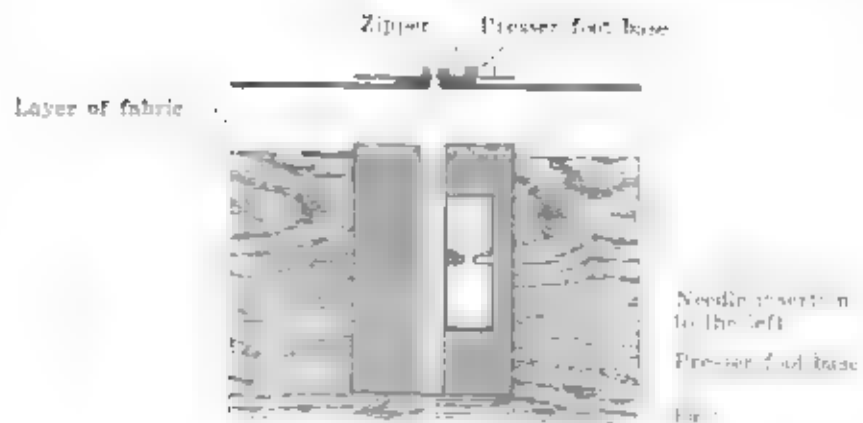
Fig. 42



When inserting zippers be sure that for the stitching of the left side of the zipper the needle position to the right must be used (see fig. 34).

Thus knob 17 must be set to the right (see fig. 2).

The stitching of the right side of the zipper must be performed with needle position to the left (see fig. 33).



Zigzag sewing

Zigzag sewing, with service by hand

Adjustment of stitch width

At the right hand top of the body of the sewing machine the adjustment knob 18 (see fig. 2) will be found. It serves to regulate the stitch width. When turning the zigzag adjustment knob 18 the width of the stitches will be set. The pointer on knob 18 indicates your position on the scale with zigzag width and gives the actual width of the seam. For plain stitching the pointer on the knob 18 must indicate

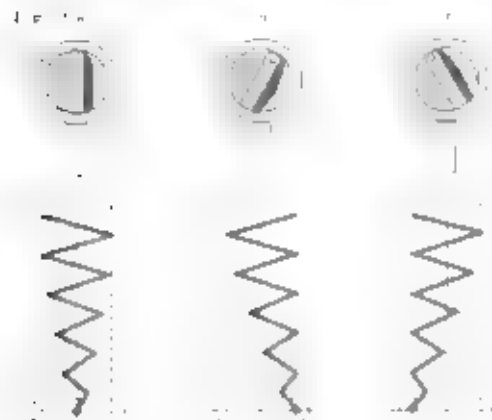
number zero on the scale. Thus a plain stitch will result. When turning the adjustment knob 18 to the right (in clockwise direction) the pointer will move from number zero to a higher figure. The higher the number the more the pointer will move, thus the zigzag stitch will be larger. Following the adjusted position on the scale, the adjustment knob 18 can be regulated while sewing, but attention, operate your sewing machine. Your only benefit if the needle is outside of the line of fabric.

Centre, right, or left position of needle

Above the zigzag adjusting knob 18, lever 17 is provided. This lever can also be adjusted when sewing, but when the machine is at a standstill it can equally be set only when the needle is outside of the line of fabric.

If the tip of this lever is placed upwards, i.e. when the pointer is directed exactly upwards, the needle throw will be set in to both sides, proceeding from the centre to the left and to the right, with every alternate width of the zigzag stitch (see fig. 37a, normal position of the needle).

By turning the pin downwards a manner that the arrow points to the right, the piercing of the needle will be



Needle position at the needle	Needle position at the needle	Needle position at the needle
Needle position at the needle	Needle position at the needle	Needle position at the needle
Needle position at the needle	Needle position at the needle	Needle position at the needle
Needle position at the needle	Needle position at the needle	Needle position at the needle


in a straight line at the *right* edge of the adjusted zigzag width (see fig. 35b, needle position to the right). Thus the different zigzag stitch widths are only to be seen on the left side of the seam. On the other hand, if the arrow points to the left, the piercing of the needle will be in a straight line only at the *left* edge of the adjusted zigzag width (see fig. 35c, needle position to the left).

Most zigzag sewing work is done with the zigzag stitch adjusted in central position, while the sewing machine needle is generally set to its left position when making buttonholes, sewing on buttons, and producing ornamental stitches. For other ornamental stitches often the right zigzag position is used, sometimes also by means of combining with the previously mentioned two needle positions.

Zigzag sewing

(Never use 6-ply threads, but only 2- or 3-ply.)

For zigzag sewing adjust the sewing machine as follows:

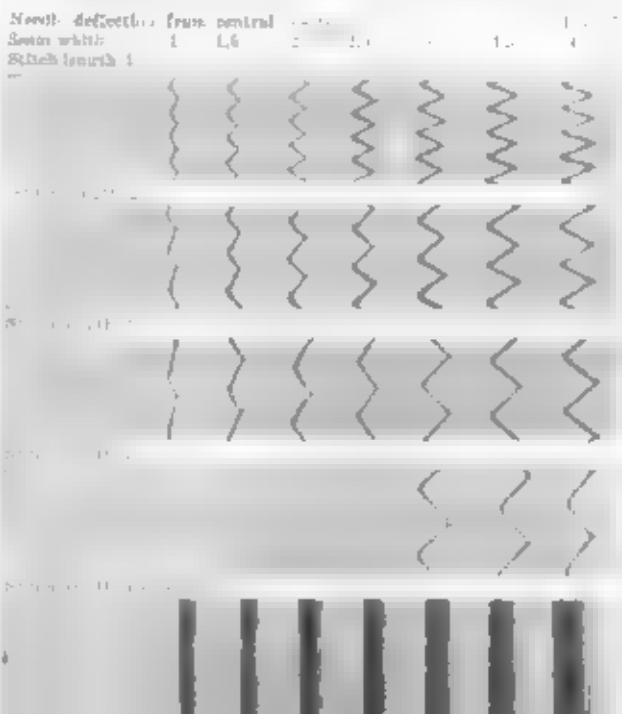
1. Raise thread lever 7 to its uppermost position.
2. Insert zigzag foot, not to be mistaken for the zigzag embroidery foot which has its lower surface hollow ground. When raised, leave zigzag foot in this position.
3. Thread upper and under thread, and place both threads under and to the back of zigzag presser foot.
4. Turn knob 25 to the right, the symbol  being set on sewing.

5. Adjust stitch length regulator 21 onto the wished for stitch length.

6. Fix slide-on table.

7. Lower zigzag presser foot.

Proceeding from stitch length zero to four, and with a stitch width equally from zero to four, the simple zigzag seam- will appear with central needle position as shown hereunder. Of course all intermediate sizes can be used as regards the stitch width, and also the stitch length.



Elastic Sewing of Knitted Goods

- Always use a very thick thread for fastening tricot and other knitted goods. Never do it with basting thread.
- Use perfectly straight and pointed needles. Size 7-12 mm.
- The thinnest area of material should be placed always under and to the left of presser foot.

If the tricot seam is not regular, test whether

- the needle is accurately set, and
- size of thread does really correspond with size of needle or not.

If the zigzag seam seems to be not elastic enough, it will just be necessary to adjust a larger width and a shorter stitch length in order to obtain a better elasticity of the seam.

Mending tricot and other knitted goods by means of elastic seams

A fresh piece of tricot fabric is placed on top of the damaged area in the direction of the loops and basted by hand, using darning thread to this intent.



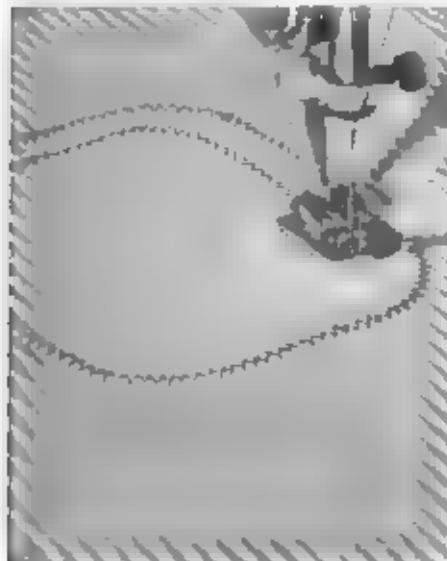
Stitch a zigzag seam along patchwork edge about the depth of presser foot towards inside

Adjustment of machine.

Zigzag width upon 3 or 4

Stitch length upon 1

Fig. 33



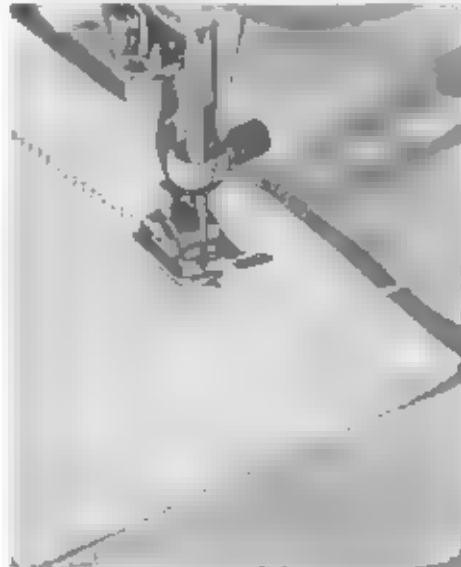
Tricot seams

With ordinary tricot it seems advisable to make a fold with all seams and then only stitch across

Zigzag width upon 2.5 or 3

Stitch length upon 1.5

Fig. 34



If a seam is stitched without being folded along the edge, it is necessary to stitch it a second time with parallel stitches approximately 1/8" from the cut edge, in the direction, wherever the machine and the seam are prevented at times, from being distorted.

Zigzag with open toe make
Stitch length 10 to 12.

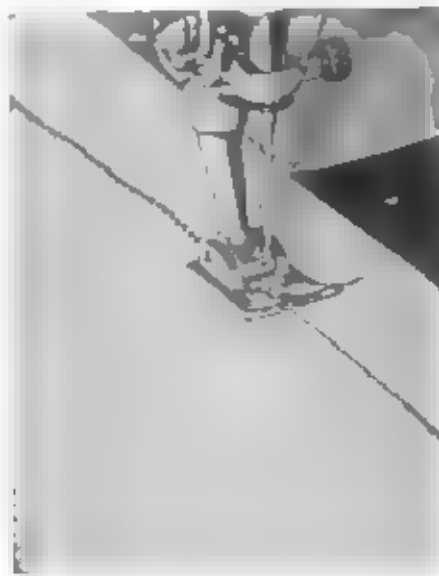
FIG. 10



Finish with a zigzag seam.

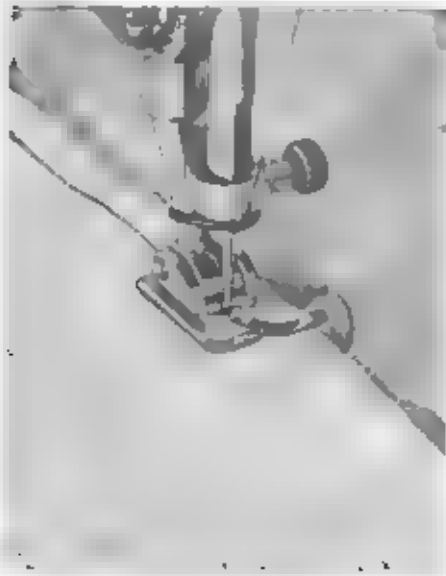
Zigzag with open toe make
Stitch length 10 to 12.

FIG. 11



The tricot or elastic side seam

Fig. 27



Place both pieces of cloth on top of one another and stitch a first seam about $\frac{1}{8}$ inch from the pressed fold from the cut edge.

Zigzag width upon 1.5

Stitch length upon 1

Fig. 28



Cut off projecting edge at about $\frac{1}{8}$ " distance from seam

Fig. 29



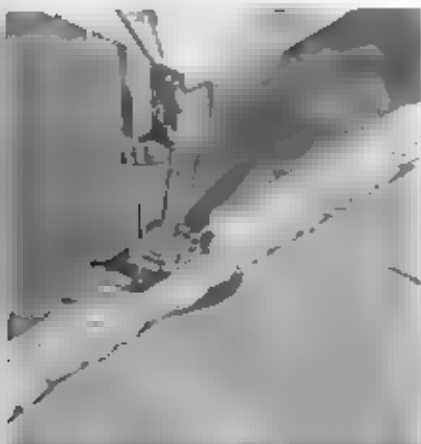
Now stitch another seam across the new edge of cloth (winding round)

Zigzag width from 1.5 to 4

Stitch length from 1.5 to 2

Sewing on lace

When on laces used at stitch lengths and foot or stitch widths as a rule. Normally the stitch length regulating lever 24 (see fig. 1) is set at 1 and the stitch width lever 25 at from 1 to 2. Place the lace on the fabric to be sewn, approximately 1 cm from the edge, in order to facilitate sewing on. Now stitch the lace with zigzag stitch 10, then cut off the material edge projecting along zigzag seam.

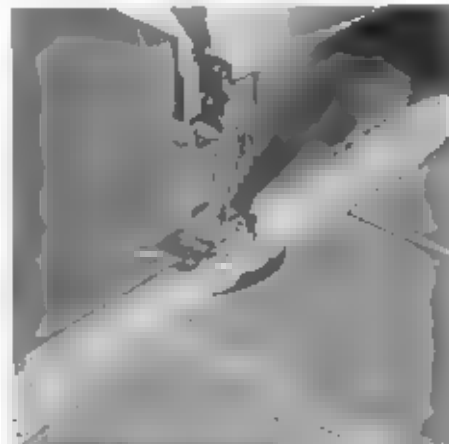


Roll Hemmer

The rolling hemmer, characterized by two red lines on its shaft, is similar in shape to the ordinary hemmer. The only difference is that its stitch hole is not round, but elongated so that zigzag seams can be sewn with it. The rolling hemmer is operated in the same manner as the ordinary hemmer foot. The rotary knob 18 (see fig. 1) is set at approximately 1 to 1. Rolled hems are used particularly for edging fine material.



Fig. 10



The scalloped hem

For scalloped hems use the rolling hemmer too. The material or elastic foot is inserted in the special guide as is the case when using the rolling hemmer. The zigzag stitch bridges the entire seam. Tight top thread tension and large stitch length produce the scalloped effect. This scalloped hem is employed mainly for edging knitted lines, goods.

Braiding



FIG. 3

Introduce a soft cord to the guide 1, be of the zigzag embroidering foot, while it marked by one red line (Fig. 3) and, stitch, of embroider, over with zigzag stitches, of the mercerized thread no. 70/2 or 60/2.

A great variety of effects can be obtained with this type of work - Colour thread, coloured cord, or a number of adjacent seams g.s.o. will still enhance said effects.

Ruffler

Light soft fabric - such as Batiste, Georgette, Tulle, etc. - will give a very attractive ruffle effect, obtained, using the embroidering foot and working with a stitch length (Fig. 4).

When ruffler rainer stiff fabrics - such as Fl. plin, Reps, or Wool - are used, a piece of thread must first be introduced into the guide 1, be of the embroidering foot and stitch, not the underside of the fabric, sewing a zigzag stitch with a width of 1.5, with a stitch length of from 1.5 to 2.

At a distance of 1 cm. a second row is sewn, whereupon both rows of the zigzag are moved together, when needed to a uniform ruffle. If the ruffled part is combined with a straight one, this seam should be sewn in between the two ruffled rows.

FIG. 4



AUTOMATIC BUTTONHOLE SEWING

There are three different kinds of buttonholes.

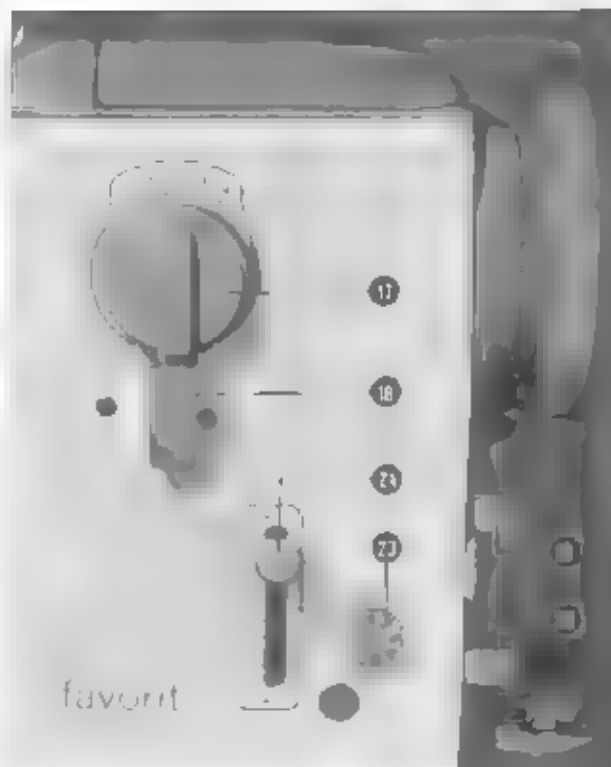
- a. The ordinary buttonhole
- b. The buttonhole with cord inlay
- c. The raised buttonhole

The ordinary buttonhole

This is sewn with normal gathering thread tension, with a special threading of the bobbin case. The sewing of the buttonhole is performed with the cloth turning the cloth around. This can be made either step by step, the sewing machine being stopped after each operation, or in one working process i.e. without interrupting the various working stages. It will, however, be well to learn the sewing of buttonholes step by step; after some time you will be able to sew the entire buttonhole in one single working process as well.

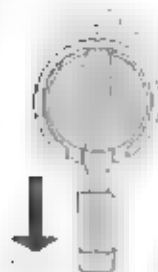
Threading of the under thread:

An increased tension of the under thread produces still better results when sewing buttonholes. To get this higher bottom thread tension without changing the lower tension itself, which is correctly set for normal sewing (see fig. 50), a hole has been drilled through the finger of the bobbin case. For normal sewing the bobbin case is threaded as explained on page 12.



For sewing buttonholes, the machine should be adjusted as follows:

1. Insert buttonhole presser foot.
2. Feed drop knob 25 (see fig. 1) must stand on symbol "sewing".
3. Draw zigzag knob grip lever 18 downwards, so that it can work together with the fixed stops on sewing machine stand.



4. To engage the buttonhole device proceed as explained hereafter: Draw the upper lever 19, which is marked with a buttonhole symbol, with a light movement towards you and then upwards. Now let it go: the buttonhole device is now engaged in its working position. To disengage the buttonhole device proceed in the reverse order.

5. The stitch length adjusting lever 22 is pushed upwards as far as possible.

6. After the stop has been brought into working position by moving the grip lever of the zigzag knob 18, get hold of it and swivel it in such a way that the pawl comes to lie against stop pin 1. This is done by moving said grip lever slightly to the right. Now the pointer pin of zigzag knob 18 will be approximately opposite scale number 1.5.



Fig. 54

7. Adjust needle position regulating knob 17 (see fig. 2). The lever is turned so far to the left, until the white mark at the top end is lying exactly opposite the mark on the zigzag lever 18. Now the machine is perfectly adjusted for buttonhole sewing.



Fig. 55

The step by step sewing of the buttonhole is performed as follows:

1. Sewing the lefthand edge

Start the machine; then the lefthand edge is sewn with backward stitches. A scale on the buttonhole presser foot serves for determining the length of the buttonhole. After the wished for length of the lefthand edge has been attained, stop the machine at once. Always take care that at that moment the needle is up and outward of the work itself.

2. Sewing the first end stitches

For this purpose take hold of the zigzag lever 18 and give it a strong push to the left, until it touches stop 11. Then sew a few end stitches, and after that

stop the machine once more and set the needle up (see fig. 57).

3. Sewing the righthand edge

Bring the zigzag lever 18 back from lefthand stop 11 to righthand stop 1 and start the machine again. Then stop it anew a few stitches before the righthand edge has become as long as the lefthand one and set the needle up again (see fig. 58).

4. Sewing the second end stitches

Again set the zigzag lever 18 to the stop 11. After a few stitches have been sewn, stop the machine once more and set the needle up as you did before (see fig. 59).

Fig. 57





Fig. 57



Fig. 58



Fig. 59



Fig. 60

2. Sewing the fastening threads

For sewing the fastening threads, pull the zigzag lever 18 - which is still against stop 11 - towards the front; then push it entirely to the right, passing thereby over stop 1 (see fig. 60). In this position the sewing machine sews now the plain stitch, in order to make fastening threads.

When stitching these securing threads, it is recommended to hold the fabric slightly back.

For the next buttonhole zigzag lever 18 and the other necessary levers should be adjusted as follows:

1. Set zigzag lever 18 once more against stop 1.
2. Turn lever 17 to the left, until the white lines of the levers 17 and 18 are facing each other.

3. Push the stitch length regulating lever 24 upwards as far as possible, until it touches the stop. Thus the sewing machine is again correctly adjusted for buttonhole sewing and the handling of zigzag lever 18 is once more effected as stated under "The step by step sewing of the buttonhole".

Sewing the buttonhole in one single operation

To the contrary of the just described method, the buttonhole can easily be sewn in one operation, i.e. without stopping the sewing machine after the different working steps. The buttonhole is sewn in one single operation as described hereafter: Having adjusted the sewing machine for buttonhole making and having pressed zigzag lever 18 against stop 1 - see fig. 54, set the machine going and keep on holding zigzag lever 18 without the least interruption.

As soon as the wished for length of the edge is reached, move the zigzag lever 18 with a vigorous movement against stop II (see fig. 57) and because only a few stitches are necessary for sewing the fastening ends, move the zigzag lever 18 corresponding to the sewing speed so to say immediately before stop I (see fig. 58) and press it against said stop. As soon as the second right-hand edge has reached the length of the first, continue only except for a few stitches, move the zigzag lever 18 again towards stop II, and since here too only a few stitches are required for the fastening of the second edge, move the zigzag lever immediately quite to the right, in accordance with the sewing speed, i.e. beyond stop I, by drawing the zigzag lever 18 towards you, i.e. to the front (see fig. 59 and 60).

Regulating the closeness of stitches

The Bernina sewing machines, models 740, respectively 741 and 742, are provided with a patent device by means of which the closeness of the stitches can be changed when sewing buttonholes or working the satin stitch according to the material being stitched and the sewing thread.

This device is operated with the aid of the stitch regulating knob 23 fitted with a scale numbered from 1 to 10.

According to the kind of fabric to be stitched (fine, medium, or stronger ones), a even trial, the feed of the fabric will differ when sewing buttonhole edges. The stronger and softer the material the more the



Fig. 61

feed should be increased. This change takes place by turning regulation knob 23. This regulating knob is equipped with numbers equivalent to those of the fixed scale on the machine stand itself.

If number 1 is placed opposite the fixed scale, it means that the smallest feed has been chosen for the buttonhole edge. Turning said regulation knob to the left the numbers will be higher and the feed is thereby increased as regards the fabric used for this operation.

It means that hereby for every kind of fabric the corresponding closeness of stitches can be chosen. The same adjustment which has been chosen for making the edges of the buttonholes is valid too for ornamental stitching with the same kinds of fabric.

Buttonholes with cord inlay

As inlay use this cotton cord and place it, as is shown in fig. 63, on the nose at the back of the buttonhole presser foot, and sew the buttonhole in the manner described hereabove.



The cord loop protruding beyond the back end of the finished buttonhole is tightened in such a way that the loop under the back fastening disappears. Then the two thread ends are cut (see fig. 62).



Fig. 64

The raised buttonhole

This kind of a buttonhole is sewn with a slack lower tension and a strong upper thread tension. The upper thread tension should be so strong that the bottom thread appears in a straight line on the upper side of the fabric used.

For raised buttonholes the upper thread should absolutely be unglazed, 6-ply or 10 thread, whereas a

very thin thread will be necessary for the hobbin (cf. i. no. 50/2).

Adjusting the sewing machine from automatic buttonhole sewing to zigzag or straight plain stitch

The grip lever of the pointer knob 18 (see fig. 51) is pushed upwards. Now the lever of zigzag knob 18 can be swivelled at will from zero to four over the stops I and II. Lever 17 is now swivelled into upright position, causing the needle to pierce into centre of stitch hole with zero stitch width. Grip lever 18 with its buttonhole symbol is drawn to the front and pushed into its swivel position.

Never put the machine away before having changed over from buttonhole adjustment to zigzag or straight plain sewing, in order to have the machine ready for sewing these kinds of works when using it another day.

Sewing buttonholes without using the automatic buttonhole device

Buttonholes can also be sewn without employing the automatic buttonhole device. In such cases make the following adjustments:

1. Insert buttonhole presser foot marked with three black lines on its shaft.
2. The lever 18 (see fig. 1 and 51) remains in its position as with zigzag sewing.

3. The needle displacement lever is set to left position by turning lever 17 completely to the left (see fig. 36). In doing so do not use the white marking.

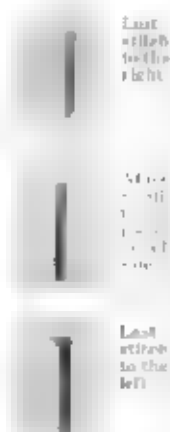
4. Set zigzag pointer 18 on 1.5 to 1.7. When sewing a buttonhole in knitted material, select stitch width 2.

5. Set stitch-length regulating lever 24 so that it comes to lie a little bit below the zero mark to the left of the stitch-length scale plate. This can only be done if the grip of the said stitch-length regulating lever 24 is not fully screwed in.

6. Set drop feed reversing knob 25 (see fig. 1) on sewing symbol, by turning it to the right.

7. Now sew the first edge to the length of the desired buttonhole. The last needle stitch of the finished edge must be to the right, whereby the needle should be allowed to remain inserted only $\frac{1}{16}$ " to $\frac{1}{8}$ " in the fabric.

8. Raise buttonhole presser foot and turn cloth by 180 degrees in clockwise direction. Then lower presser foot again and allow the needle to enter the fabric towards the left. Again here the needle should penetrate into the material only with the point



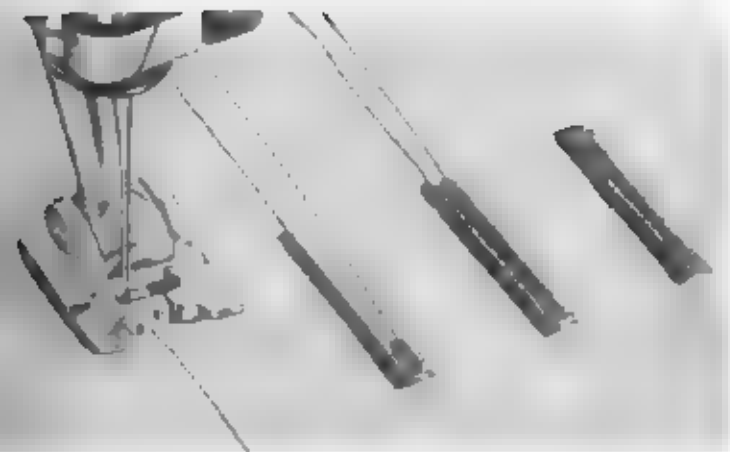


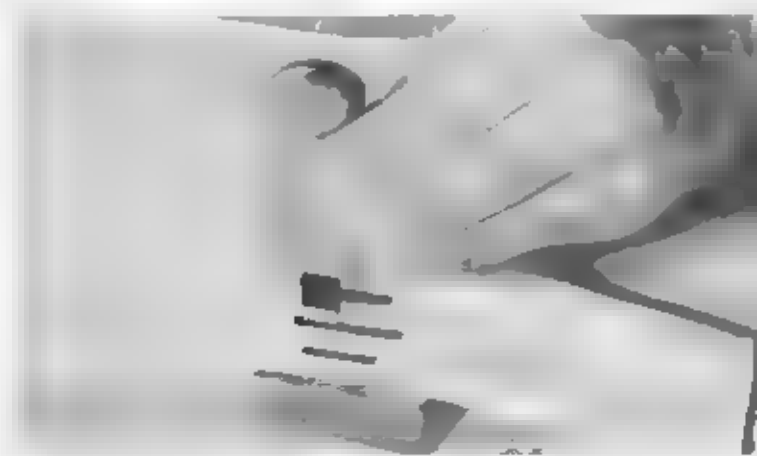
Fig. 62

9. Set zigzag lever 18 to 3.5 and sew a few end stitches for the bar. In doing so, pull the fabric lightly towards you, in order to shorten the feed. Last needle stitch should be to the left. Allow needle to penetrate into the fabric only with the point.
10. Set zigzag knob pointer 18 once more to 1.5 or 1.7 and sew the second edge over a somewhat shorter length than the first one. Last needle stitch to the left.



11. Set zigzag knob 18 again at twice the edge width and sew the end stitches for the buttonhole bar. Again pull the fabric a little bit back to shorten the feed. Last needle stitch to the left.
12. Set zigzag knob 18 on zero position, and sew a few fastening stitches, again pulling the fabric lightly forwards towards you, always in order to shorten the feed.
13. Finally lay the work on the wooden support and put the cloth between both edges by means of the buttonhole blade. (See fig. 63.)

Fig.



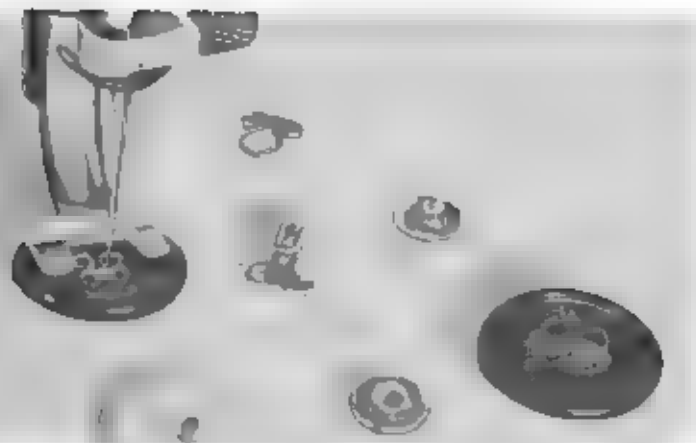


Fig. 2

Sewing on Buttons

1. Position needle and stitcher on the left. Adjust lever 17 (square) to the left.
2. Lower foot up by turning reverside knob 25 (see fig. 2) to the left, until soft line starts to appear.
3. Attach button passing foot beneath it, then black thread on its shank and place button under and press foot as shown up to fig. 46.
4. Adjust upper stop cloth with screw up to the 11. Starting between the stitches, pass the button and now sew in button with six or eight stitches.

5. To fasten stitches the needle should always stitch in a hole of the button. The zigzag knob 18 (see fig. 1) is to be adjusted in hole position, and fastening takes place by means of a few stitches.

With four-hole buttons—lift the fabric with the button and make six or eight stitches in the central pair of holes. Three buttons and hooks are sewn in the same manner.

Darning with wool

When darning with wool use the patented darning foot for wool. Proceed as follows:

1. Lower foot up by turning reverside knob 25 (see fig. 2) to the left, until soft line starts to appear.
2. Select high length needle, in lower 24 (see fig. 2) to be used in center, respectively the thread feed 22 (with stop) should be raised.
3. Set zigzag knob 18 (see fig. 2) on 3 to 4.

For the wool button thread use darning cotton. Wool is not only used to cover the damaged area. Upper and lower threads in the darning wool should be made of woolen yarn, preparing to being used to be supplied, so that the work should be as invisible as possible. Thread tension is the same as in ordinary darning.

Woollen socks are pulled over the free arm without using the darning ring for stockings.

Darning with wool is performed in two operations, i.e.:

1. The damaged area is covered with wool.
2. The covering wool rows are sewn down. In the three figures no. 67a, 67b and 67c, the working process when darning is clearly indicated.

As it appears from fig. 67a, the wool is introduced in the slot of the presser foot, whereby the thread is allowed to project over the rear edge of the presser foot by approximately $\frac{3}{16}$ ".

Now span the wool over the hole as is shown in fig. 67b. Start at the left hand top corner of the damaged

area and stretch the wool sideways, i.e. from left to right and vice versa, by shifting the cloth accordingly to and fro. At the end of each row the zigzag stitch will fasten the wool to the fabric, when direction of movement is changed. Make sure that these rows are as close as possible together, because later on no more wool will be used.

As soon as the damaged area will be entirely covered with wool, the wool thread should be cut off at the darning presser foot. Now fasten the wool rows with zigzag stitches across them as is shown in fig 67c, by shifting the cloth forward and backward. Zigzag stitch is employed to ensure that the mend remains fully elastic, but care should be taken not to place the individual zigzag rows too closely together.

FIG. 67

FIG.



Applique Work

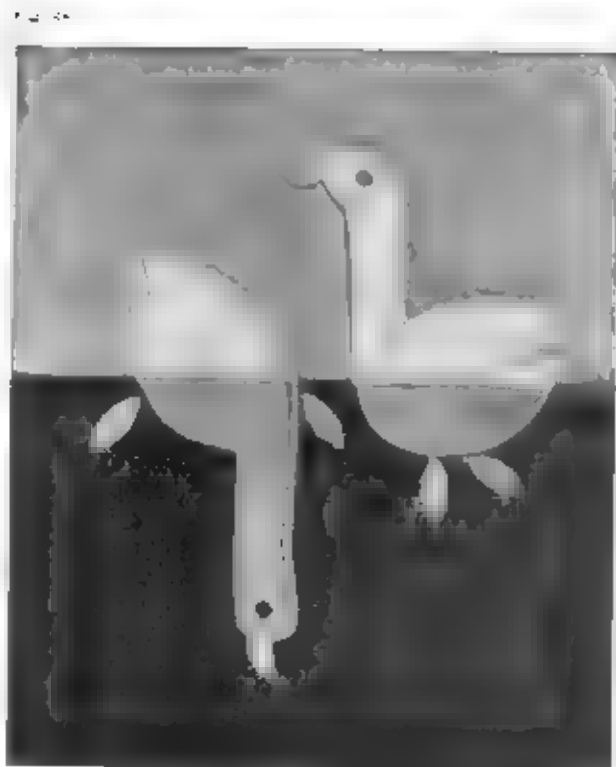
New articles to this list:

An attractive designative effect is obtained by sewing filaments of materials of different colours or texture to the cloth.

Applying the same logic, we can see that, ladies and gentlemen, the defendant's theory is not only illogical, but also inconsistent with the evidence.

The hot-iron presser foot will be advantageous, especially in the case of thick fabrics, for sewing work.

First draw the slashes to the inside side of the fabric. Trace off from them the slashes into outside side of a playing card (slightly longer). Cut pieces slightly longer than necessary and fasten them to right side of this pattern by the cut in the side of the design. The slashes are now oriented in a manner as to be laid flat to rest on the inside of the dress. The sewing done is simply that of the same piece as the pattern is. Then a narrow binding of red and gray is made along the sewing — on right side. Now finish the upper edge with a row of sewing water (22 gauge) and the lower edge with the edges of the outside of a 1/4" wide of fabric.



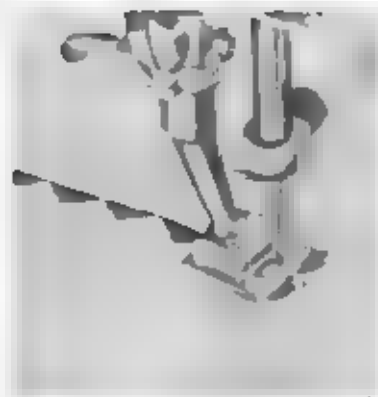


Fig. 704

Zigzag understitching foot (1) and line.

Zigzag sewing foot.

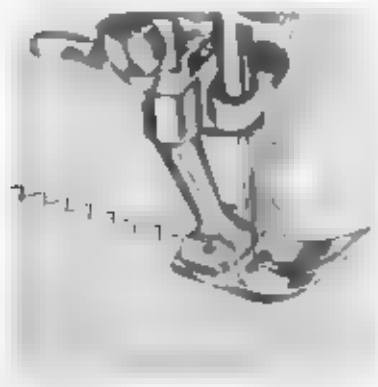


Fig. 705

Ornamental stitches, hand-operated

The zigzag decorative stitch

With the Bernina zigzag sewing machine device (cf. Models nos. 734, 741 and 742) the most intricate decorative lines can be produced in the simplest possible way.

According to the ornamental stitches required, the stitch regulation lever (24) is turned on, as expressed with the zigzag symbol (8) turned in left or right position, turning the zigzag sewing foot. After a few experimental stitches the sewing of decorative patterns becomes almost very easy.

For ornamental stitches of medium stitch length use the zigzag sewing foot (see Fig. 704). For the construction of decorative lines of short stitch length, the zigzag and underfoot (see Fig. 705) should be employed. This latter has a recessed lower face.

SATIN STITCH CONTROL

The adjustment of the right stitch length for decorative stitches and buttonhole is very easy on the Bernina sewing machines, thanks to the patented satin stitch control. Suppose the stitch length regulation lever is on no. 2 and the stitch length must be adjusted for sewing a buttonhole.

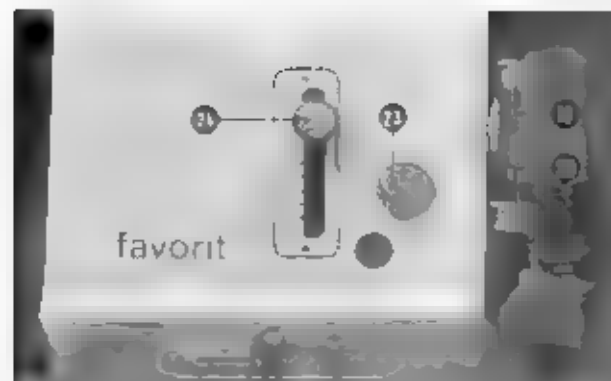
First of all the satin stitch control lever 20 is swivelled as far as possible upwards, and afterwards the stitch length regulation lever 24 is equally pushed upwards until it strikes the stop.

The satin stitch control must be brought into the disengaged position only if the machine serves also for backward sewing. This disengagement of the satin stitch control takes place by pressing the lever 22 down, whereby the normal state for the choice of the stitch length, forward and backward is again restored.

As following the thickness of the yarn, which has to be employed for the different works this stitch length ought to be smaller or larger, the stitch control for satin stitch is graduated on a rotating axis. By turning knob 23 to the left, said stitch length will be increased following the numbers indicated on said knob, on which you will find the numbers from 1 to 5.

The thicker the yarn to be used and the stronger the cloth to be worked, the more the knob must be turned towards the left in the direction of the next higher number on knob 23. The number is exactly opposite to the fixed mark on the machine stand. The knob must be adjusted in a way that seams of uniform thickness can be achieved.

Fig. 11



Automatic Fancy Stitches

Every Bernina sewing machine of the models no. 740 and 741 is equipped with an ornamental stitch device which is automatic, whereby it enables the creation of decorative stitches without having to manipulate any control whatsoever.

Just select the desired pattern, set the control lever, and then simply concentrate on guiding the fabric through the sewing machine with both hands free to do so.

The Bernina sewing machine of the model no. 741 is equipped with an automatic ornamental stitch device for four different decorative stitches. Its operation is identical to that of model no. 740.

Reversal upon automatic ornamental stitch sewing

The reversible lever 13 for zigzag or ornamental stitches is placed at right-hand side of the top arm (see fig. 52a and b). It protrudes from the slot in the plate 113. If the machine is to be set for the use of the automatic ornamental stitch device, put this lever backwards; to the contrary, push lever 13 forwards, if you wish to reset the machine for zigzag stitches.

At the left of this reversible lever is placed the ornamental stitch selecting lever 12 which protrudes from graduated plate 112. This plate bears the symbols of the twenty possible decorative stitches which can be sewn.

The following section is only applicable to models no. 740 and 741.

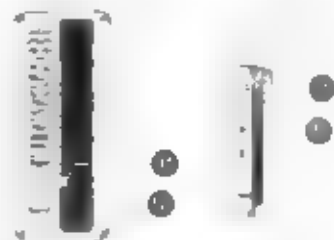


Plate 113 model no. 740 ▲ reversible



Plate 113 model no. 741 ▼ reversible

When sewing zigzag stitches, lever 12 which shows a white line on its side facing the needle, always is set at zero position, marked by a spring lever 10 in front position. When having selected a decorative stitch, set switch lever 12 against that symbol, so that the white line thereon comes in with the mark. This is performed in the following manner:

Put lever 12 to the right - its guiding slot, into a rest stop which is felt and depressed until the image of the ornament stitch and the white mark of the lever are facing themselves, then release said lever

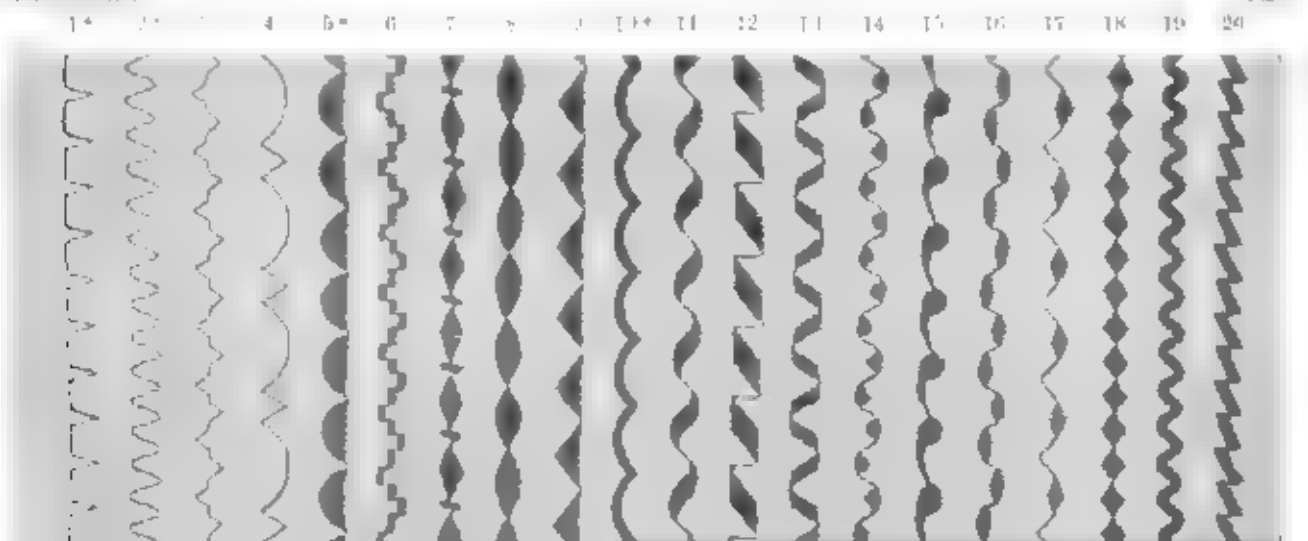
which will catch automatically, remaining in this position. When displacing switch lever 12, ensure that the needle is outside the fabric i.e. in its utmost position. The stitch width adjusting knob 15 should be set in such a way that it shows on number 4, i.e. to produce the largest stitch width.

After threading the machine, ornamental stitching can be started exactly in the same way as with ordinary sewing.

When switching back to normal zigzag stitching, place switching lever 13 again in front position.

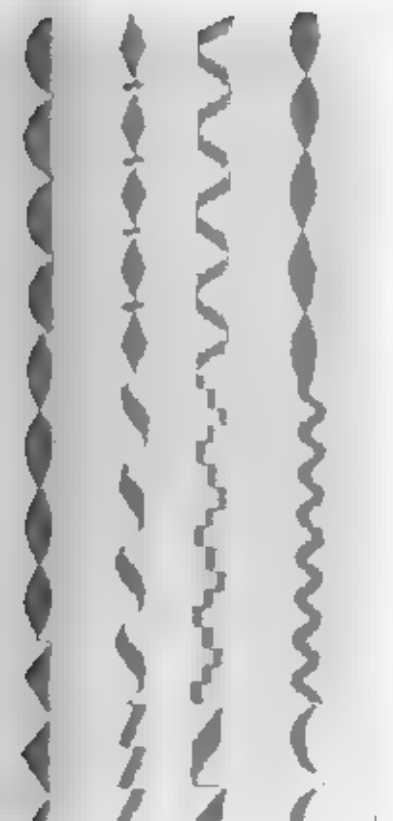
Stitch width: up to no. 4
Stitch length: near up to zero

Particulars:



The fancy stitches of model no. 741 are all marked by means of an asterisk *.

Fig. 7.



Stitch length upon no. 1;
Stitch width upon no. 4

FIG. 74

Automatic decorative stitches with one single needle

The stitch patterns can be varied by changing the stitch length from nearly zero to four.

A further variation is possible when combining individual decorative stitches during the sewing itself, as can be seen from the opposite examples.

- Patterns combined with each other (see fig. 74).
- Different seam patterns combined together (see fig. 75).



FIG. 75

Automatic decorative stitches with two needles (Fig. 75)

Zig-zag stitches are equally possible when sewing with two needles.

However, make sure that on principle the two needles must not be distanced further than allowed by the estimated hole in the side plates.

Needle throw plus distance between needles equals width of selected scale. When a double needle with two needle distances is employed, the stitch width should not exceed 14 as a maximum.

Naturally ornamental stitches made with two needles can also be modified by changing the feed feeded by selecting threads of two different colors.

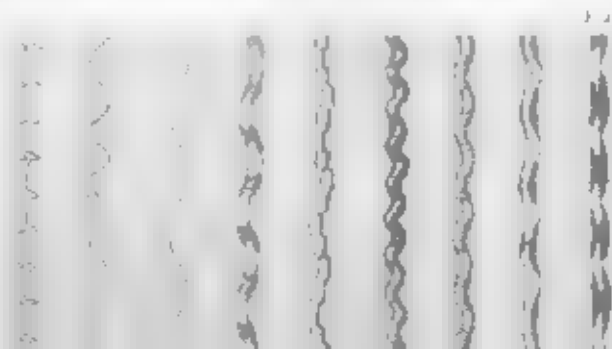


FIG. 76

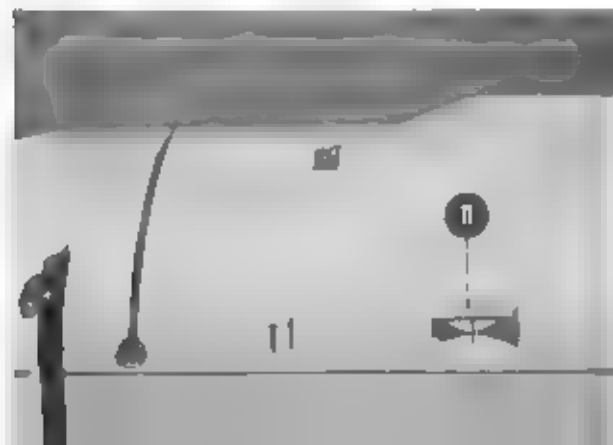
THE ORNAMENT INDICATOR

The Bernina sewing machines of the models 5, 740 and 74 have been equipped with a novelty, the so-called ornament indicator, showing the actual position of the ornament being stitched. At the front side of the arm to the right, near the tension sight hole, the sight hole II has been arranged, which is filled with a mark. Now, when the machine is sewing an ornament, the decorative stitch symbol is moving inside the machine and passes this sight hole, where it can clearly be seen (see fig. 77). Even when operating the machine at high speed, this symbol will be observed when it passes through.

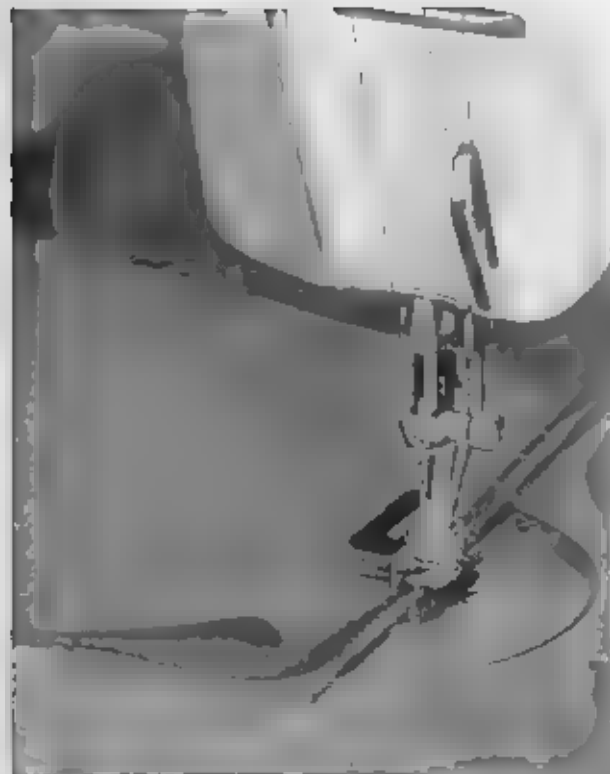
As soon as the front end of the decorative stitch is cutting the mark, the sewing machine begins to



Fig. 77



stitch a new ornament. When one half of the ornament has passed the marked sight hole, this means that half of the ornament has been achieved. With this marked sight hole it is now possible to notice the moment when the machine is beginning to sew an ornament. This device will be of special importance when sewing ornaments of which only one single decoration has to be stitched and placed within a certain specified area. It will also be of great value when changing an ornament altogether.



Blindstitch sewing

Blindstitch sewing means sewing together two pieces of cloth, where the upper piece is folded and sewn onto the lower one, in such a fashion that the seams are invisible on the side.

This kind of work is performed with the blindstitch presser foot (see fig. 78), which possesses an elastic cloth guide between the fingers of the foot, but is otherwise identical with a normal presser foot.

Blindstitch sewing can also be accomplished with the ordinary zigzag stitch or by means of the automatic device with built-in blindstitch cam.

1. Setting of machine when sewing with ordinary zigzag stitch

- a. Attach blindstitch presser foot.
- b. Insert needle to right position.
- c. Set zigzag knob to a stitch width between 2 and 3, according to the thickness of the fabric to be sewed.
- d. Set stitch length regulation lever to stitch length 2.
- e. Set thread dog reversible knob on sewing symbol.

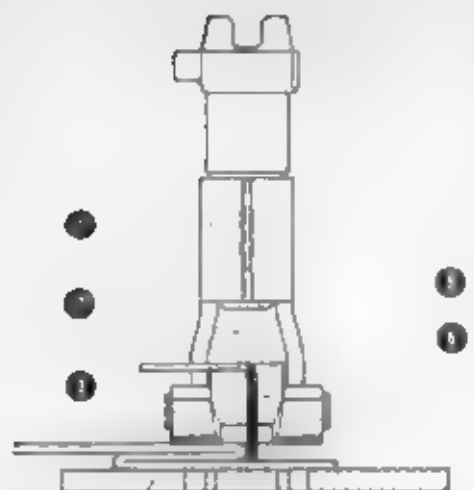


Fig. 70

- Blindstitch presser foot (No. 6306-203)
- Position of needle stitch to the left
- Folded upper layer of cloth
- Needle plate
- Material stop and guide
- Position of needle stitch to the right

After having threaded the sewing machine, put the lower flat piece of cloth underneath the blindstitch presser foot, then place the upper piece of cloth on top and fold it in such a way that it always touches the elastic guide. Now lower the blindstitch presser foot and start sewing.

The zigzag stitch width should be adjusted in such a way on the zigzag button 12 that in its left deflection the needle is stitching through the middle of the folded piece of cloth, which will make the seam invisible on the upper piece of material when flattened. Said stitch width is between 2 and 3, depending on the thickness of the cloth used.

2. Adjustment of sewing machine for working with the blindstitch cam

Whereas, when blindstitching with the normal zigzag stitch, the folded piece of cloth is pierced after every second stitch, when employing the blindstitch cam there are five straight plain stitches between each piercing of the folded piece of material.

Thus the machine should be adjusted as explained hereunder.

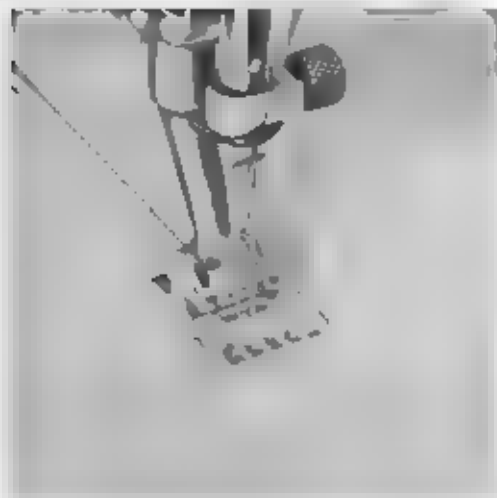
- a) Attach blindstitch presser foot
- b) Connect automatic device backwards by means of lever 11 (see fig. 1 and 72)
- c) Set lever 12 on blindstitch cam (see no. 1)
- d) Set needle into right position of stitch
- e) Set zigzag knob 14 to a stitch width between 2 and 3, according to the thickness of the material to be sewn
- f) Set stitch length regulation lever 24 on a stitch length of 2, 3, or 4, depending on the kind of cloth to be sewn
- g) Set feed dog reversible knob 25 on sewing symbol.

The blindstitching itself is made exactly as has been described under section 1.

Pintucking

The pintucking device is only delivered against extra charge.

Fig. 96



The complete pintucking attachment comprises the following parts:

- 1 pintucking start plate with oval stitch hole
- 1 feed dog
- 1 double needles for pintucks: 1 of approximately 1.1 mm (1.7" and 2)
- 1 pintucker: with 3, 5 and 7 grooves
- 1 pintuck foot plate
- 1 pintucking device for connecting

When preparing the sewing machine for pintucking, proceed as follows:

- 1 Set needle to centre position in stitch hole by adjusting grip 17 (see Fig. 1) to the middle.
- 2 Set zigzag stitch lever 18 (see Fig. 1) upon zero position.
- 3 Remove standard needle from needle bar and introduce a double needle, proceeding exactly as with a standard needle.
- 4 Attach the pintucking presser foot corresponding to the needle distance (p. 10).

The pintucker presser foot with 7 grooves
D10 needle of 1.1 mm distance

The pintucker presser foot with 5 grooves
D10 needle of 1.1 mm distance

The pintucker presser foot with 3 grooves
D10 needle of 1.1 mm distance



- | | |
|---|--------------------------------|
| 4 Thread tension regulator | 35 Spool pin |
| 7 Thread take-up lever | 44 Thread guide slit |
| 8 Thread tension | 45 Needle holder eyelet |
| 9 Thread tension regulating disc | 100 Additional tension |

Threading the two upper threads

To thread the two upper threads of the sewing machine for pintucking, proceed as for normal sewing (see fig. 81).

Place the two reels of thread onto the two pins 35 of the double-ended holder at the back of the top of the machine arm. Now pass the thread of the front reel through pre-tension 48, equally at the back of machine; from there into slit 44 running across top arm and draw the thread into left tension disc, down to thread tension regulator 4, and up again through the back bore of thread take-up lever 7. Then down again to needle holder eyelet 45 and finally from front to rear through the eye of left needle.

With the second thread proceed in the same manner but draw it through the right tension disc and following this still through additional tension 100. From there through thread tension regulator 4 up to thread take-up lever 7 and into the front slit of same. Now down once more to needle holder eyelet and finally through the eye of right needle. Both threads should always run separately through thread tension 8 in order to produce finer pintucks.

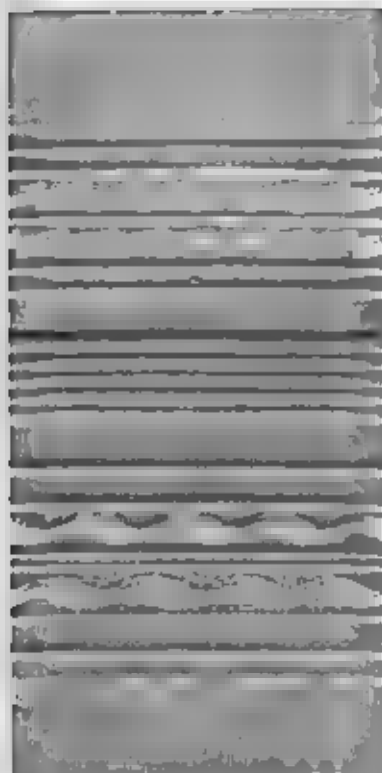



Fig. 52


The pintucking

A pintuck is created by the bottom thread which pulls both upper threads together, so that the fabric between the needles is raised and forms a tuck.

For pintucks with inserted cord the insert is passed from the tail slipper,  a thread reel, pin of the accessory case through the groove in the flap, up through the hole in the stitch plate between both teeth rows of the feed dog, and guided away from operator below and to the back of the pintucking presser foot.

Ornamental seam with double needle

When employing one pintucking needle and the standard zigzag presser foot a parallel double decorative seam can be produced, whereby it will be advantageous to choose two threads of different colours.

When using a double needle with $1/16$ " or $1/8$ " needle distance, an additional small zigzag motion can also be performed. The needle deflection should, however, only  so large that neither needle fouls the hole on the stitch plate either on the left or on the right.

Therefore the zigzag knob (see fig. 1) should only be moved very slightly to the left, starting from zero point.

Hemstitch sewing

Hemstitches can be made:

1. With the single hemstitch needle, using the Bernina zigzag sewing machines, models 710, 711 or 712.

2. With the patented double-loop, using the Bernina zigzag sewing machines.

With the *single hemstitch needle* only effects resembling hemstitch can be obtained, particularly on thin fabrics such as organza, tulle and silk, whereas with the patented *double-loop hemstitch needle* genuine hemstitches can be made, which are known as *one-speed hemstitches* and *double-speed hemstitches*.

In the case of it will be possible to work not only thin, but also medium thick to thick kinds of cloth together.

In the following pages, first the several operations will be represented together with instructions as to the choice of threads to be used and the adjustment of the sewing machine.

1. Hemstitch sewing with the single hemstitch needle on Bernina zigzag sewing machines

Insert the hemstitch needle in the sewing machine instead of the normal sewing needle.

Threading is done in the well-known manner (see page 14).

As upper thread use *darning* or *fine embroidery thread* (for DMC no. 10).

As lower thread use *equally darning or fine embroidery thread* (for DMC no. 10).

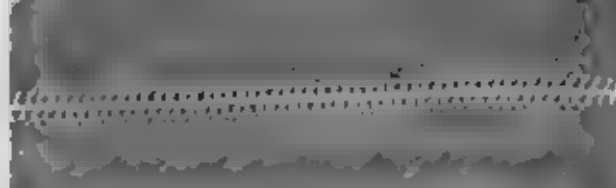


Fig. 43

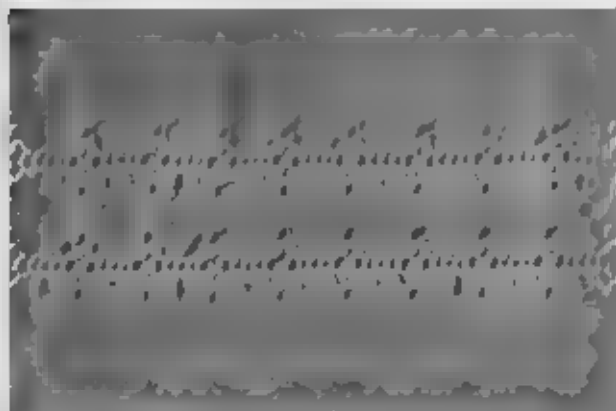
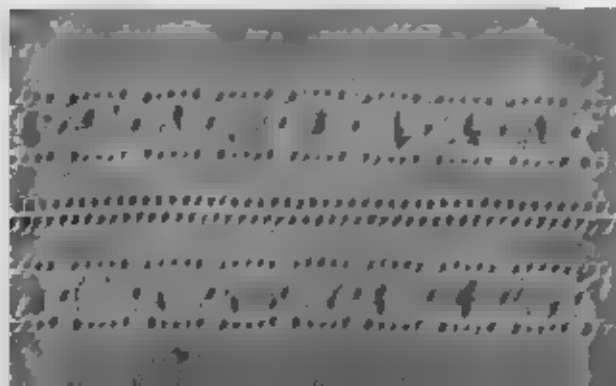


Fig. 44



For fine fabrics, when a decorative zigzag is required, adjust width over to 2 and stitch length adjusting over to 1. After having brought up the under thread, lay the fabric under the presser foot and begin to sew in the well known manner. The result will be a hemstitch, as shown in fig. 43.

If suitable decorative stitches of the automatic system are used instead of the usual zigzag stitch, effective ornamental finishes will be produced such as they are shown in the following illustrations.

With conventional stitch cam no. 1

Blindstitch

Sew first seam. After having attained the required length, turn the fabric by 180 degrees and sew the second seam in such a way that the zigzag stitches are opposite each other.

Stitch length 1.5

Stitch width 3.5

With decorative stitch cam no. 1

Sew first seam. After having reached the wished for length, turn the fabric by 180 degrees and sew the second seam in such a way that the needle, when deflected, i. e. every sixth stitch, pierces into the line already existing from the first needle. The needle of the pattern, i. e. between the two frames 10-12 changes there will be a normal seam with the ordinary zigzag stitch.

Stitch length 1.5

Stitch width from 3 to 3.5

With ornamental stitch each no. 2

Sew first seam, leave the needle stuck in the fabric at the side where the second seam is wanted. Then turn the fabric by 180 degrees and sew the second seam alongside the first one.

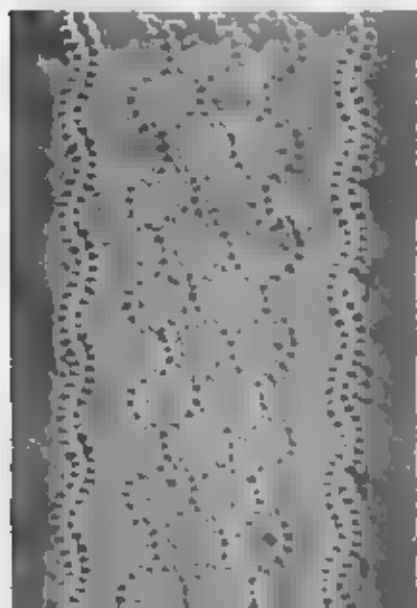
Stitch length: 1.5

Stitch width: 1.5

The two outer seams are decorative stitch no. 19.

Stitch length: 1 Stitch width: 0.5

Fig. 87



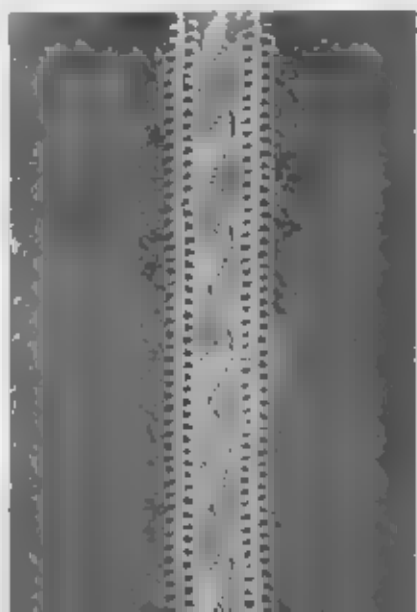
Two seams with normal zigzag stitch.

Stitch length: 1

Stitch width: 2

Between both zigzag stitches make an ornamental seam with normal zigzag needle.

Fig. 88



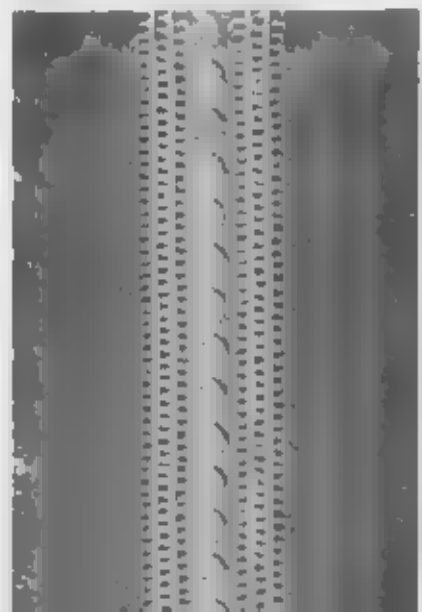
Two seams beside each other when sewing the second seam take care that it must be at the left of the first seam and that the needle when sewing the right-hand stitch must pierce in to the existing holes of the first seam.

Stitch length: 1

Stitch width: 2

Between middle make an ornamenta stitch no. 19 using a decorative normal sewing needle.

Fig. 89



**2. Hemstitch sewing with the patented double needle
on Bernina zigzag and plain stitch sewing machines
with transversely set shuttle, zigzag stitch plate,
and zigzag presser foot**

Insert the double hemstitch needle into the machine instead
of the normal sewing needle.

The threading of the upper threads is made in the same
manner as when sewing pintucks (see operating instruc-
tions).

As upper thread use f. i. DMC no. 100 with left-hand twist

As under thread use f. i. DMC no. 50 with right-hand twist

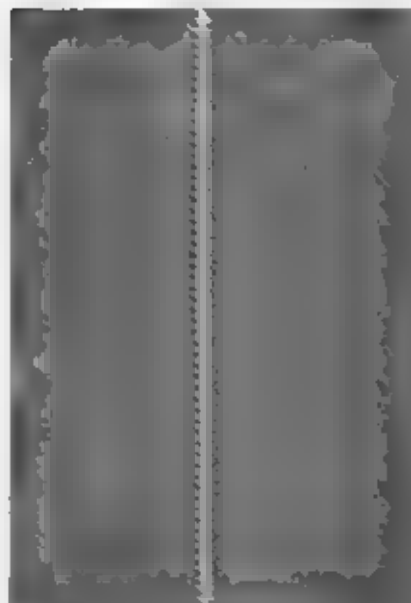
With zigzag machines set the zigzag lever at zero point or
zero plain stitch.

In both cases the stitch length regulation lever should be
adjusted upon 1 to 1.5.

After having brought up the under
thread in this manner under the
presser foot and make a straight
seam as when plain stitching.

This will produce a hemstitch (see
fig. 80) such as is well known as a
one needle process.

Fig. 80



Direction of cloth feed



If a hemstitch known as a *two-needle hemstitch* must be made, a second working operation will be needed. After having sewn the single hemstitch, turn the fabric by 180 degrees, allowing the point of the large

needle to touch the cloth when **II** is turned round that point. Now the second seam can be made in the same way, **III** taking care that the large needle always enters the previously pierced hole (see Fig. 70).

↓ Direction of cloth feed
during first operation

Direction of cloth feed
during second operation ↑

Examples with two-needle hemstitch

FIG. 69

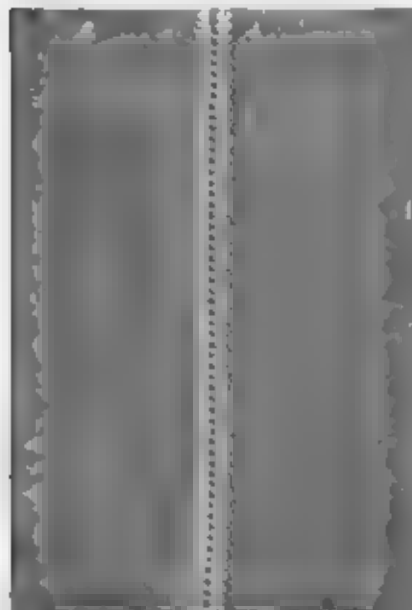


FIG. 70

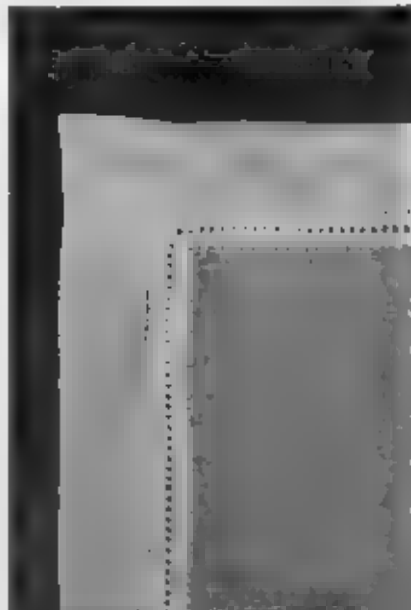
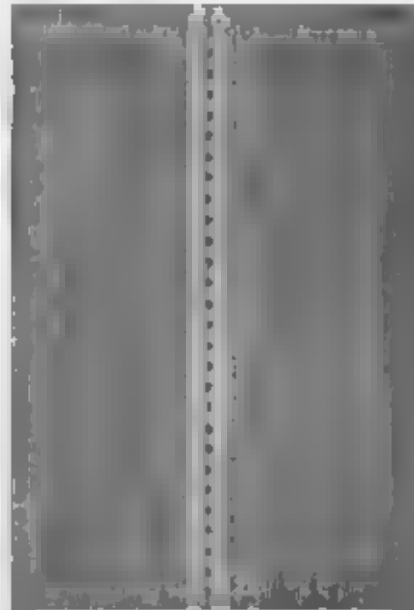


FIG. 71



Monogramming

There are two methods of embroidering initials

1. Embroidering initials with feed dog lowered and guiding the embroidery frame by hand
2. Embroidering with the feed dog using the automatic satin stitch control executed by the machine.

In both cases some practise will be found indispensable. An embroidery frame is always to be used, wherein the fabric is stretched. Only quite hard and stiff cloths will permit to work without the embroidery frame.

With method no. 1 please observe the following adjustments:

- a) Insert a needle no. 100. According to the fineness of the fabric a correspondingly thinner needle will be employed.
- b) Insert the wool darning presser foot
- c) Lower dog feed
- d) Thread the sewing machine. For the upper thread use embroidery yarn no. 100 (if 1. DMC no. 100)

For the under thread use embroidery yarn no. 100

- e) Place material into embroidery frame in such a manner that the initials designed come to lie right in the centre of said frame
- f) Adjust the width of stitch, i.e. zigzag width, according to the size of the intended initials. Then stitch length is set almost upon zero position.

After having placed the embroidery frame under the needle the bottom thread should be brought up. Lower presser foot. Start sewing machine and keep it running smoothly at a fair speed, thus getting the best results. Guide the embroidery frame with both hands slowly and steadily along the designed initials, but without turning same. After some practising the initials can be embroidered also without using the wool darning presser foot. Fig 93 illustrates a few examples of embroidered initials

With the method no. 2 the same settings should be made as described herebefore for the first one only with the following exception:-

- a) insert the embroidery presser foot instead of the wool darning presser foot;
- b) instead of lowering the feed dog, this device must remain in sewing position;

- c) adjust fabric speed on a small stitch length, which can easily be made with the aid of the satin stitch control;
- d) adjust stitch width according to size of initial to be embroidered

Here too the initial should be designed onto the fabric: after having spanned the cloth into the frame, the initial should come to lie right in the centre of the embroidery frame, i. e. just under the needle.

As illustrated in Fig 94, begin to sew edge A and after completion, having reached the top of the initial, stop sewing machine, leave the needle stuck in the fabric with stitch to the right, and turn the embroidery frame round the needle, until the direction towards edge B is attained

Now you will be able to sew edge C. When swivelling anew, after having reached the required length, let the needle in the left stitch and turn embroidery frame into the novel direction. In that case you must not sew over the already finished edge, but leave a gap, thus producing a break in the outlines: this will be necessary for shaping many letters of the alphabet. In many cases the letters cannot be stitched in one single go. If breaks are necessary, a few small stitches with stitch width zero should be made at the end of every finished edge in order to secure the seam, but when you begin stitching



Fig. 93

a novel edge, this has to be done with the same width of edge like the first time, until the initial will be finished.

Various and effective results can be obtained by means of stitching another seam along the outlines of a letter, but with a narrower stitch. Eventually this can be made with a yarn of a different colour, oversewn by means of an inlay thread, as has been illustrated in Fig 94a



Fig. 94a

Fig. 94a

English Embroidery

(A special device available against extra charges)

The complete equipment for cyclet embroidery, which is not part of the standard accessory, comprises the following parts:

- 1 cyclet embroidery stand, part no. 54 06 00;
- 3 slides with guide pins for cyclet embroidery work of 10, 15, and 20 cm in diameter (no. 54 06 09, 54 06 01, and 54 06 04);
- 1 exact embroidery presser foot no. 54 06 02;
- 3 patches no. 54 11 07 for cyclet diameters of 10, 15, and 20;
- 1 wooden block no. 54 11 08.

This special device allows the sewing of fashionable cyclet and circular embroidery on the Leonardo-Favourite sewing machine.

With its aid different hole sizes can be surrounded, and circular embroidery of any diameter of approximately 10 cm can be done. Darning sewing around the stitch width may be varied at will.

For cyclet embroidery work the machine should be arranged as follows:



Fig. 95

Position of slide when
executing eyelet
embroideries

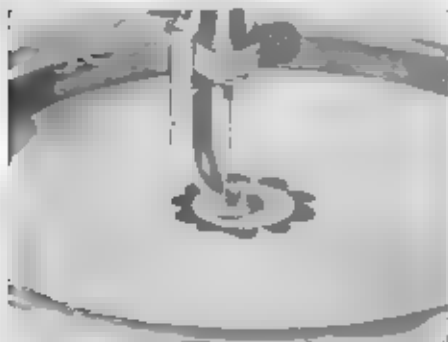



Fig. 96

Embroider within the
embroidery frame



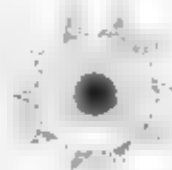
Fig. 97

Position of slide for
circular embroideries

1. Set needle stitch to left position by turning grip 17 (see fig. 2) to the left.
2. Lower feed dog by turning reversible knob 25 (see fig. 2) to darning symbol.
3. The normal stitch plate must be changed against the eyelet embroidery stitch plate which is equipped with exchangeable slides provided with guide journals, whereby also the special embroidery presser foot must  inserted.

Always use the embroidery frame. We recommend winding strips of cloth around 1st outer ring, in order to obtain a better tension of the fabric to be embroidered and to prevent its being damaged.

Only after having clamped the fabric, the holes should be punched with the piercers supplied.



It will be of advantage to design the holes previously on the fabric. Then place the material under the eyelet embroidery presser foot, so that the guide journal of the slide should come to lie in the hole. As has been mentioned already heretofore, the needle stitch should be set in left position.

For both upper and bottom embroidery thread no. 60—80 two-ply should be used, which will give best results in even sewing around the holes.

For eyelet embroidery the thread tension is of utmost importance. The under thread tension should be slightly stronger than that of the top thread, so that the thread knots should only show themselves on the lower face of the fabric.

The slide in the embroidery plate should be positioned in such a way that the needle, when making a righthand stitch, enters in the recess of the guide journal exactly beyond the edge of the material.

This setting has to be changed according to stitch width and should therefore be repeated every time. Then allow the sewing machine to operate at regular speed and turn the embroidery ring at the same time three or four times around the guide journal in the same regular way in clockwise direction.

Finally set zigzag knob 18 (see fig. 2) upon zero position and secure the thread by a few stitches. These binding stitches should be parallel to the embroidery stitches, so that they will remain practically invisible.

When the slide of the stitch plate is reversed, as has been shown in fig. 97, the guide journal can be employed as a centre in sewing circular embroideries.

In doing so the needle pierces through the long slit of the slide.

By changing the density of the stitches, i. e. by varying the speed of rotation of the embroidery ring during the stitching, and using threads of different colours, very attractive and multifarious patterns can be produced, enhancing by the way the look of the eyelet embroideries.

As a rule kindly observe when executing eyelet embroidery works that the holes of the same size should always be finished successively, so that the slide need not be changed too often.

HOW TO AVOID MACHINE TROUBLE

First of all we should like to give you some hints how machine troubles might be avoided, then what may be their cause, and finally how to remedy them.

1. On principle

In most cases troubles are resulting from faulty manipulations of the sewing machine.

However, if other causes are presumed, the machine should be examined, whether:

- a) the needle has been correctly inserted.
The long groove should always be in front, i. e. on the side where the machine has to be threaded;
- b) the needle is the correct size for the thread used; for darning of fine fabrics take needle size no. 70, and for other sewing work needle size no. 80 or no. 90. As regards sizes of needles with corresponding threads see page 13;
- c) The machine is properly cleaned. Remove free arm cover plate and clean all lint thereunder. Then cleanse feed dog with brush;
- d) shuttle is properly cleaned with but a few drops of oil (see fig. 19);

- e) no thread ends are stuck between the thread tension discs;
- f) no thread ends are jammed under the bobbin case tension spring;
- g) the sewing machine can easily be started with the handwheel.

NOTE: Make it a rule always to raise thread take-up lever to its upmost position; it will help to avoid a lot of machine troubles.

2. The causes of upper thread breaking

may be the following:

- a) The use of badly polished needles of inferior quality. Needles should always be purchased at a Bernina shop;
- b) Needle incorrectly set. Remember that long groove must always be in front;
- c) Needle is blunt or bent;
- d) The relation between size of thread and needle is not o.k. (see table on page 13);
- e) Upper tension thread is too tight;

- 3) Thread of bad quality, full of knots. Thread dried out by too long storage. Thread should never be stored in heated rooms.

If the machine has been in use for a fairly long time, thread breaking may have a cause only a competent sewing machine mechanic can deal with:

- g) Stitch plate hole has been damaged by the needle and requires re-polishing, ask for the specialist.
- h) Shuttle point is damaged

3. Cause of under thread breaking

can be:

- a) Under thread tension too tight;
- b) Under thread badly wound on bobbin;
- c) Bobbin is deformed and jams in the bobbin case;
- d) Stitch plate hole has been damaged by the needle and requires re-polishing. Call for a skilled sewing machine mechanic

4. Missing stitches

May be caused by:

- a) using unsuitable needles of other make. Always employ needles of system 130;

- b) needle is bent;

- c) needle not correctly set. Long groove must always be exactly in front. When inserting needle push it up as far as it will go;

- d) needle of inferior quality or badly polished;

- e) size of needle is not fit for size of thread, or vice versa.

5. Needle breaking

may have the following reasons.

- a) Needle holder screw is not securely tightened.
- b) Upper thread tension too tight;
- c) The material has been pulled from under the presser foot towards the front, after having finished with the sewing work. Thereby the needle got bent.

Always remove the cloth from the machine by pulling it back from under the presser foot base;

- d) Size of needle and size of thread are not in correct relation together. Often the needle is too thin for too thick a yarn, whereby the needle becomes bent of course;
- e) Use of thread of inferior quality, showing knots or unevenly twisted;

- f) During sewing never pull the cloth too strongly towards the back.

6. Faulty seams

■ A faulty uneven seam results:

1. if there are thread ends remaining between the thread tension discs;
2. if there are thread ends under the bobbin case tension spring;
3. if the bobbin is deformed and jams in the bobbin case;
4. if the thread is not always evenly thick in all its length;
5. if the shuttle is not regularly oiled.

■ When sewing tricot or other knitted goods, make sure of the following items:

1. tricot should always be basted with darning thread, never with basting thread;
2. use perfect needles of size no. 70 or no. 80;
3. the thin area of the fabric should always be placed to the left side of the presser foot;
4. sizes of needles and thread must always perfectly correspond;

3. If the zigzag stitch seems not to be elastic enough, adjust for a larger width and a shorter stitch length. In order to increase the elasticity of the seam;

c) Disagreeably puckered fabric

In most cases the cause of puckering is too tight a tension as well on the upper as on the under thread.

When sewing tricot and other knitted goods, the material must never be pulled to the back with the hands; otherwise it will get puckered, of course. Care should be taken that when sewing tricot or the like the feed towards the presser foot be always sufficient, by means of very lightly pushing the tricot on both sides of presser foot.

7. The machine operates too slowly

The motor does not work correctly (it should be examined by a skilled mechanic).

Probable causes:

- a) Tension of drive belt may be too tight. Ask the expert!
- The sewing machine has been idle for a fairly long time in a moistened room. In such a case it

skin. The exposed skin must be kept dry. Temperature should be monitored after work should be carefully noted.

If an individual's body has been exposed to the sawing machine, the following must be followed: If lubrication at the rubbing points with petrol is not an improvement, the machine must be decontaminated immediately. If the sawing machine skin is examined, it will be important to check:

General notice

To prevent any damage to the physiotherapy equipment, the following must be followed as far as possible. If the sawing machine will be used for some time, the equipment should be checked as follows and then changed immediately. After every working operation, the machine should be cleaned to avoid any dirt. The prevention will greatly help to avoid any trouble.

After every use, the machine should be cleaned and checked for safety.

Normal accessories for model 740

Part no. *On the sewing machine:*

- 64 00 30 01 1 Extension plate with plug socket
(for machines with pedal starting
device).
- 64 00 31 01 1 Extension plate for horizontal
machines.

64 12 01 00

63 11 10 00

- 1 pintuck needle of $\frac{3}{64}$ "
- 1 embroidery ring
- 1 connecting cable to the mains
- 1 instruction book

64 11 31 00 *In sewing kit:*

- 53 06 03 04 1 zigzag presser foot
- 53 16 09 00 1 embroidery foot (marked with
1 red line)
- 53 06 08 00 1 broad hemmer
- 53 06 15 00 1 edger with quilting guide
- 53 06 32 03 1 blindstitch presser foot
- 53 06 18 01 1 buttonhole presser foot
- 53 11 34 00 1 buttonhole knife
- 53 11 37 00 1 wooden support
- 54 06 70 00 1 darning presser foot
- 54 06 71 00 1 small darning plate
- 54 07 61 00 6 bobbins, one of which being on
machine
- 53 11 32 00 1 small screwdriver
- 60 11 33 00 1 special screwdriver
- 63 11 12 00 1 oiler
- 1 package of assorted needles of the
130 system

54 12 05 00

53 06 48 01

53 06 18 02

53 06 29 61

53 06 11 00

53 06 13 00

53 06 46 00

53 06 20 00

53 06 44 01

53 06 50 00

Available against extra charge:

- 1 darning ring for stockings
- 1 narrow hammer
- 1 special buttonhole presser foot
- 1 wool darning presser foot
- 1 rolling and scalloping hemmer,
combined (marked with 2 red lines)
- 1 felling foot
- 1 gathering presser foot
- 1 presser foot for sewing on buttons
(marked with 2 black lines)
- 1 standard presser foot for plain
stitching
- 1 attachment for general standard
presser feet, normally to be found
in trade
- Pintucking equipment
- Eyelet embroidery equipment
- Knee control lever, complete

Normal accessories for model 741

Part no. *On the sewing machine:*

- 64 00 30 01 1 Extension plate with plug socket
 (for machines with pedal starting
 device)
- 64 00 31 01 1 Extension plate for horizontal
 machines

- 54 12 01 00 1 embroidery ring
- 53 11 10 00 1 connecting cable to the mains
- 1 instruction book

Available against extra charge:

64 11 03 00 *In sewing kit:*

- 53 06 03 04 1 zigzag presser foot
- 53 10 09 00 1 embroidery presser foot
- 53 06 18 02 1 special buttonhole presser foot
- 53 06 82 02 1 blindstitch presser foot
- 53 11 34 00 1 buttonhole knife
- 53 11 37 00 1 wooden support
- 54 06 70 00 1 darning presser foot
- 54 06 71 00 1 small darning plate
- 54 07 61 00 6 bobbins, one of them being on
 machine
- 60 11 33 00 1 special screwdriver
- 53 11 32 00 1 small screwdriver
- 53 11 12 00 1 oiler
- 1 package of assorted needles of the
130 system

- 53 06 11 00 1 rolling and scalloping hammer,
 combined
- 53 06 08 00 1 broad hammer
- 53 06 13 00 1 felling presser foot
- 53 06 15 00 1 edger with quilting guide
- 53 06 46 00 1 gathering presser foot
- 54 12 05 00 1 darning ring for stockings
- 53 06 48 00 1 narrow hemmer
- 53 06 18 01 1 special buttonhole presser foot
- 53 06 29 01 1 wool darning presser foot
- 53 06 50 00 1 attachment for general standard
 presser feet, normally to be found
 in the trade
- Pinlocking equipment
- Eyelet embroidery equipment
- Knee control lever, complete
- 53 06 26 00 1 presser foot for sewing on buttons

Normal accessories for model 742

Part no.	<i>On the sewing machine:</i>	53 11 10 00	1 connecting cable to the mains
64 06 30 01	1 Extension plate with plug socket (for machines with pedal starting device)		1 instruction book
			<i>Available against extra charge:</i>
64 06 31 01	1 Extension plate with arrangement for horizontal machines	54 12 05 00	1 darning ring for stockings
		53 06 48 01	1 narrow hemmer
		53 06 08 00	1 broad hemmer
64 11 31 00	<i>In sewing kit:</i>	53 06 18 02	1 special buttonhole presser foot
53 06 03 04	1 zigzag presser foot	53 06 29 01	1 wool darning presser foot
53 16 09 00	1 embroidery presser foot	53 06 63 03	1 blindstitch presser foot
53 06 18 02	1 special buttonhole presser foot	53 06 15 00	1 edger with quilting guide
53 11 34 00	1 buttonhole knife	53 06 11 00	1 rolling and scalloping hemmer, combined (marked with two red lines)
53 11 37 00	1 wooden support	53 06 13 00	1 felling presser foot
54 06 70 00	1 darning presser foot	53 06 20 00	1 presser foot for sewing on buttons (marked with 2 black lines)
54 06 71 00	1 small darning plate	53 06 44 01	1 standard presser foot for plain stitching
54 07 81 00	6 bobbins, one of them being on machine	53 06 46 00	1 gathering presser foot
53 11 32 00	1 small screwdriver	53 06 50 00	1 attachment for general, standard presser feet, normally to be found in the trade
60 11 33 00	1 special screwdriver		Pintucking equipment
53 11 12 00	1 oiler		Eyelet embroidery equipment
	1 package of assorted needles of the 130 system		Knee control lever, complete
54 12 01 00	1 embroidery ring		

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